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DERMATOLOGY AND SYPHILOLOGY IN A MODERN MEDICAL PROGRAM

Chairman's Address

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During and since World War II vast changes have occurred in medical education. There has been a reshuffling of methods and concepts. There has been a reevaluation of component parts of the whole of medicine. Perhaps the most spectacular changes were noted in the field of psychiatry. The realization that emotions and psychiatric states play an important role in the causation of many bodily ills has brought about the metamorphosis of a minor specialty to a major one. Under proper, well informed and forceful leadership, psychiatry has passed through the period of growing pains and confused adolescence and has flourished into full manhood. Perhaps in just as spectacular fashion, physical medicine and rehabilitation under the able leadership of the Council on Physical Medicine and Rehabilitation, the Baruch Committee and the dynamic personality of Dr. Howard Rusk are rapidly growing and attaining stature.

THE STATUS OF DERMATOLOGY AND SYPHILOLOGY

Unfortunately, the specialty of dermatology and syphilology has not been keeping abreast of the pace setters. I do not want to convey the impression that there has been no progress in this specialty. Nothing could be further from the truth. But I do want to point out that many medical schools have been short-sighted in regard to the importance of dermatology and syphilology. Approximately two decades ago a deliberate and unwise campaign was initiated to dismember our specialty. Dermatology and syphilology were separated, with syphilis being considered a subspecialty of internal medicine; and then the department of medicine in some schools engulfed dermatology. This situation in whole or in part exists at such medical schools as Johns Hopkins, Cornell and New York University. The same situation existed in the armed services of the United States during World War I, and it was not corrected until the beginning of World War II. Dermatology and syphilology were branches of urology in both the Army and the Navy. Both services soon came to the realization that a separate department of dermatology and syphilology was essential for the proper diagnosis and treatment of skin diseases.

From the New York Polyclinic Medical School and Hospital.
Read before the Section on Dermatology and Syphilology at the Ninety-Eighth Annual Session of the American Medical Association, Atlantic City, N. J., June 8, 1949.

There is now an active movement going on in many medical schools to eliminate dermatology and syphilology as a separate department and to include these under internal medicine with the same status as cardiology or any other subspecialty of medicine. Dermatology and syphilology are no more subspecialties of medicine than is modern psychiatry or neurology. It is just as illogical to assume that physical medicine and rehabilitation are subspecialties of orthopedic surgery, general surgery or internal medicine. These are all component parts of the whole of medical knowledge. Some medical schools are even advocating the elimination of teaching the specialties. This retrogressive tendency impedes rather than stimulates medical progress.

Perhaps it is well to pause and reflect for a moment on the question, what is the essential function of a medical school? Every one agrees that a medical school exists primarily to teach all branches of medicine and surgery and secondarily to initiate and conduct research and experiments. Medicine has progressed and has become so extensive that some of the basic pedagogic concepts need revision. The more progressive and modern medical schools advocate greater emphasis on scientific medicine, with detailed study of the latest biochemical advances; the more conservative medical schools are putting emphasis on turning out good general practitioners. It seems to me that the primary function of a medical school is to impart to a student those principles and concepts which would make him a good dispenser of the benefits of general medicine and surgery. A medical student should be given the opportunity to study all the practical phases of all the special divisions of medicine and surgery so that after completion of his studies he can catheterize a patient, remove cerumen from the external auditory canal, recognize and treat effectively the common and simple conditions that occur in everyday practice. Elimination of the teaching of the specialties and elimination of rotating internships with ambulance services at our teaching hospitals are curtailing the facilities for training good general practitioners. It is hoped that those hospitals which are going to establish residencies in general practice will give due consideration to dermatology and syphilology, since these are apt to constitute about 15 per cent of cases in general practice.

REVISION OF TEACHING CONCEPTS

The time is at hand to revise concepts of undergraduate medical teaching. The American Medical Association announced in 1948[1] the creation of a joint committee made up of members of the Council on Medi-

1. Secretary's Letter, no. 84, American Medical Association, Nov. 22, 1948.

cal Education and Hospitals of the American Medical Association and the Association of American Medical Colleges to survey medical education. This committee started to function Jan. 1, 1949. So important is this survey that the committee appointed Dr. John E. Deitrick of New York to be its full time director and the survey is to extend over a three year period.

Up to the present time all phases of medical education have evolved about the medical school. Obviously, the medical schools with their limited budgets, space and personnel cannot undertake to carry on efficiently all branches of medical education. It seems to me that there are three separate phases to modern medical education: (1) undergraduate medical education for training young men to be general physicians; (2) postgraduate medical education for training specialists, and (3) continuation medical education for both general practitioners and specialists. Medical schools, with few exceptions, are integral parts but independent and autonomous units of a University; they are set up with their own deans and are admirably equipped to teach young men and women the basic principles of medicine and surgery and to carry out research work in the basic sciences and to a limited extent in the clinical branches of medicine and surgery.

NEED FOR POSTGRADUATE MEDICAL SCHOOLS

The medical schools and some teaching hospitals have had the responsibility of carrying on postgraduate and continuation courses. The demand for postgraduate study far exceeds that for undergraduate work, and most medical schools are not prepared and equipped adequately to carry on postgraduate teaching. There are about 20,000 students enrolled in the medical schools of the United States. During the year 1947-1948, nearly 83,000 physicians were enrolled for some form of postgraduate or continuation course.[2] The demand for postgraduate education is growing rapidly. Therefore I propose the establishment in a few large medical centers of a postgraduate medical school with its own faculty and dean to be part of a university setup and yet independent of the undergraduate school of medicine. It shall be the function of the postgraduate medical school to train physicians for the specialties and to give continuation courses to both specialists and general practitioners. I advocated this plan when I was a member of the New York Post Graduate Medical School, and I am happy to learn that through the generous contributions of the Samuel H. Kress Foundation such a postgraduate medical school is now in the process of formation as a part of the New York University-Bellevue Medical Center in New York.

What will be the effect of such a program on medicine as a whole? In my opinion, it will be an immediate impetus to advancement in every phase of medical knowledge. It will open up new horizons, increase opportunities for study and research. It will stimulate every physician in the community to better himself. There will be more rapid dissemination of new knowledge and of information on new experiments and discoveries through special publications of the new postgraduate medical schools. The substandard hospitals will be improved because they, too, can be utilized for postgraduate education. There will be more opportunities for more physicians to participate in educational activities. This stimulating influence in all medical activities will be diametrically opposite to the existent and growing tendency to stifle teaching, research and progress, especially in the so-called minor specialties of medicine, because of lack of funds, facilities, laboratories, clinical material and the many other items that are essential to research. The minor specialties then will not be relegated to the scrap heap of medical education, but will be given the stimulus they need. Continuation courses and postgraduate training for specialization will no longer be a burden to some medical schools. Chesney [3] in a recent article stated that the requirements of the specialty boards in regard to the basic sciences come at a time when the medical schools are struggling with diminished resources and are still short of faculty personnel with which to carry on their heavy obligations of undergraduate medical education and research. There is general agreement with this opinion, and the solution is the development of a few well distributed postgraduate medical schools within the framework of a University and independent of the undergraduate medical school, its faculty and dean.

PLACE OF SPECIALTY IN MEDICAL CURRICULUMS

The general practitioner through no fault of his own is poorly trained in the recognition and treatment of skin diseases. This is to be construed as an indictment not of the family physician but rather of some phases of our medical education. I made a survey of the teaching of dermatology and syphilology in our medical schools. From the catalogs of sixty-one medical schools, which were obtained by mail, the required number of hours of instruction in dermatology and syphilology for the third and fourth year medical students was compared to the total number of hours of instruction for the two clinical years. The time allotted to teaching dermatology and syphilology to juniors and seniors in medical schools was not uniform. The total number of hours devoted to the teaching of dermatology and syphilology varied from 13 to 128 and the total number of hours devoted to the teaching of all clinical subjects varied from 1,955 to 3,420. The information sought was complete in only eighteen catalogs and this is summarized in table 1. In one school only 0.4 per cent of the total hours of clinical instruction was devoted to dermatology and syphilology; in another school the percentage was 4.6; an average for the eighteen schools was 2.3 per cent. It is also noted that in six of these eighteen schools the department of dermatology and syphilology is a division in the department of medicine. In one catalog, the department of dermatology is not even listed in the index, but information relative to instruction in dermatology was found under medicine. There appears to be no obvious explanation for this variation on the basis of need. However, it is striking that where the number of hours of instruction in dermatology is greater and the courses are more comprehensive the dermatologic faculty is an eminent one and the department is separate from other medical divisions. It was amazing to find that, of the sixty-one schools, thirty-one have a separate department of dermatology and syphilology, seventeen have a division within the framework of the department of medicine and thirteen have no autonomous department at all, but the subjects are stragglers in the department of medicine. It is no wonder that the family physician cannot

2. Medical Education in the United States and Canada, J. A. M. A. 137:25 (Sept. 4) 1948.

3. Chesney, A. M.: Some Impacts of the Specialty Board Movement on Medical Education, J. A. Am. M. Coll. 24:83 (March) 1948.

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cope with simple everyday dermatologic problems. I am willing to concede that in some instances in which the hours of instruction are adequate the method of teaching may not be adequate.

In a report of the Medical Curriculum Committee of the British Medical Association published in 1948 [4] there is confirmatory evidence of the situation in the United States. The report starts out with the statement: "There appears to be general agreement that the instruction in dermatology given in the undergraduate medical school is inadequate. This is a serious matter when it is remembered that the incidence of diseases of the skin in general practice ranges from 5 to 10 per cent of all cases." Later in the report there appears the following statement: "The essential defects of most present courses are, first, the failure to train the student in the basic principles of dermatology. . . ."

Diseases of the skin represent about 15 per cent of the total daily practice of the general physician. The

TABLE 1.—*Relation of Hours Spent on Study of Dermatology and Syphilology to Those Spent on All Other Clinical Subjects During the Junior and Senior Years at Medical School*

School	Hours Instruction in Jun. & Sen. Yr.		Percentage Instruction in	Status of Dermatology and Syphilology		
	D. & S.	Clin. Sub.	D. & S.	Separate Dept.	Division in Dept. Med.	Dept. Med. Only
1	57	3,420	1.3	X	..	..
2	128	3,007	4.2	..	X	..
3	49	2,604	1.4	..	X	..
4	29	2,256	1.3	X	..	..
5	84	2,732	3.0	..	X	..
6	48	2,108	2.3	..	X	..
7	77	2,430	3.1	..	X	..
8	56	2,731	2.0	X	..	..
9	13	2,855	0.4	X	..	..
10	113	2,502	4.5	X	..	..
11	36	3,168	1.1	X	..	..
12	46	2,319	1.9	X	..	..
13	79	2,680	2.9	X	..	..
14	72	2,310	3.1	X	..	..
15	22	2,188	1.0	X	..	..
16	71	1,955	3.6	X	..	..
17	80	2,305	3.0	..	X	..
18	40	2,461	1.5	..	..	X
			2.3 (Average of hours of instruction in 3d and 4th years allotted to D. & S.)			

records of the surgeons general of the army and the navy lend support to this statement. Pillsbury, Sulzberger and Livingood [5] make the following statement in the "Manual of Dermatology": "It can be conservatively stated that some 20 to 25 per cent of all diseases in the Armed Forces are the object of dermatosyphilologic management." In other publications and discussions of this subject by Pillsbury and Livingood,[6] Cole [7] and Canizares,[8] the ratio of skin diseases to other diseases runs even higher. Is there any doubt as to the necessity of more and better teaching of dermatology and syphilology to medical students? I think not. The observations of physicians in the armed services in all parts of the world cannot be refuted.

4. The Training of a Doctor, report of the British Curriculum Committee of the British Medical Association, London, Butterworth & Co., Ltd., 1948, chap. 26.
5. Pillsbury, D. M.; Sulzberger, M. B., and Livingood, C. S.: Manual of Dermatology, Philadelphia, W. B. Saunders Company, 1942.
6. Pillsbury, D. M., and Livingood, C. S.: Experiences in Military Dermatology, Arch. Dermat. & Syph. 58:441 (April) 1947.
7. Cole, H. N., in discussion of article by Pillsbury and Livingood.[6]
8. Canizares, O.: Cutaneous Diseases in Army Air Force Personnel, Arch. Dermat. & Syph. 56:346 (Sept.) 1947.

PERCENTAGE OF DERMATOLOGIC CASES

The general practitioner has expressed a real desire to know more about dermatology and syphilology because he is confronted daily with problems pertaining to the skin. Even a hurried perusal of original articles in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and the section on Queries and Minor Notes of the same journal will convince those who are skeptical and prejudiced. An exhaustive survey of these sources for the past ten years (1939-1948) revealed the interest of the general physician in dermatology. Table 2 was prepared to show the total number of questions and notes arranged in years compared to the total number pertaining to dermatology. In ten years 5,527 questions were asked and 765, or 13.8 per cent, pertained to dermatology and syphilology. This figure is striking because it is similar to the incidence of skin diseases in the armed services and in civilian practice. Yet only 2.3 per cent of total time spent in training during the junior and senior years is devoted to dermatology and syphilology. Obviously, more time and better methods are required for teaching dermatology to medical students.

TABLE 2.—*Relation of the Total Number of Questions to Those Pertaining to Dermatology and Syphilology in Queries and Minor Notes* for Each Year from 1939 to 1948*

	Total No.	Pertaining to Dermatology	
		Number	Percentage
1939	792	125	15.8
1940	664	92	13.8
1941	543	82	15.1
1942	637	108	16.9
1943	445	54	12.1
1944	334	50	14.9
1945	537	66	12.8
1946	453	49	10.8
1947	604	67	11.0
1948	418	52	12.2
Total	5,527	765	13.8

* Section of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The need for more and better training in dermatology is further emphasized by the fact that of the total number of original and special articles and clinical notes appearing in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION during the years 1939 to 1948, 7.6 per cent pertained to dermatology. The totals gathered year by year appear in table 3.

TABLE 3.—*Relation of the Number of Original and Special Articles and Clinical Notes Pertaining to Dermatology and Syphilology to the Total Number Each Year from 1939 to 1948*

Year	Total No.*	Articles on Dermatologic Subjects*	
		Number	Percentage
1939	619	47	7.5
1940	601	45	7.5
1941	567	43	7.5
1942	554	33	5.9
1943	405	38	9.6
1944	488	30	6.1
1945	475	31	6.5
1946	401	42	10.4
1947	415	35	8.4
1948	467	36	6.3
Total for 10 yr.	5,024	380	7.6

* Articles appearing in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Some of the errors in the diagnosis and treatment of commonly occurring skin diseases can be attributed to poor training. Many physicians have had little opportunity for adequate dermatologic training in medical schools and during internship. Important conditions like cutaneous cancers and radiodermatitis are often misdiagnosed by the general physician. Common moles are confused with malignant melanomas. Some common diseases like dermatophytosis or poison ivy dermatitis are made worse by overtreatment with remedies which are generally too strong. Overtreatment of simple inflammatory or parasitic diseases was so frequent in the armed services as to rate a separate classification as a type of cutaneous disease. Even in civilian life overtreatment of common skin diseases is responsible for a large number of cutaneous ailments. During the past several years Underwood,[9] Gaul,[10] Collins and Mosby[11] have written extensively on "Overtreatment Dermatitis." Most dermatologists will readily admit that a portion of their everyday practice comprises the treatment of cutaneous afflictions caused by overzealous or improper treatment of common skin diseases. If more attention, time and prominence is given to dermatology in our medical schools, there will follow a diminution in incidence of these common errors.

COMMENT

Failure to give dermatology proper recognition may be caused by two factors: first, the inertia of the dermatologist himself and, second, the erroneous concept that dermatologists are externists. It is the policy of some medical schools to refuse to acknowledge that a dermatologist is essentially an internist with special knowledge regarding the external manifestations of systemic diseases. Most cutaneous diseases have no known systemic links, and investigations are constantly going on to ascertain the causes of such common diseases as psoriasis, acne vulgaris, lichen planus, sarcoid and the multiplicity of cutaneous manifestations due to such organisms as Mycobacterium tuberculosis and Treponema pallidum. The scope of dermatology is immense and embraces, besides diagnosis, highly specialized dermatopathology, allergy, mycology, parasitology and radiology. A dermatologist with a broad background is better qualified to head a department of dermatology and to teach dermatology to medical students than is a professor of medicine whose interests and attention are taken up with nondermatologic subjects.

SUMMARY

Because the medical schools do not devote sufficient time to the teaching of dermatology and syphilology, the general physician is poorly trained in this specialty. As a result of this poor training, the incidence of "overtreatment dermatitis" in the armed services and in civilian life is higher than it should be. The family physician wants more training in dermatology. He has expressed himself thusly by making inquiries pertaining to dermatology, and these are published in the section on Queries and Minor Notes of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Evidence has been collected to show that the incidence of diseases of the skin in general practice is about 15 per cent. Dermatology and syphilology should not be dismembered, and they are not subspecialties of internal medicine but a highly specialized component part of the whole of medicine. The facilities of most medical schools are no longer adequate to meet present day demands of postgraduate medical education for specialist training and for continuation courses for specialists and general practitioners. The development in some medical centers of completely autonomous and independent postgraduate medical schools with their own deans and faculties is advocated to meet the growing demand for postgraduate courses.

40 East Sixty-First Street.

9. Underwood, G. B., and Gaul, L. E.: Overtreatment Dermatitis in Dermatitis Venenata Due to Plants, J. A. M. A. 136:570 (Oct. 23) 1948.

10. Gaul, L. E.: Overtreatment Dermatitis, J. A. M. A. 127:439 (Feb. 24) 1945.

11. Underwood, G. B.; Gaul, L. E.; Collins, E., and Mosby, M.: Overtreatment Dermatitis of the Feet, J. A. M. A. 130:249 (Feb. 2) 1946.

THE DEVELOPMENT OF STANDARDS IN DERMATOLOGY

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In the early practice of medicine men entered the field of medicine by reason of their interest in the treatment of the sick. Their ability and, as time went on, their experience and personality determined their career. There were no other standards. Later, medical schools and hospitals were established; prescribed training, degrees and licensure appeared. Thus there gradually developed accepted standards for the practice of medicine in general. Soon physicians became interested in a particular phase of medicine, and the specialties were born. Still the physician's interest, his ability and, as always, his personality were factors in his success in his specialty and his standing in his community.

It was gradually found that instruction and a wide experience could be obtained under the earlier specialists of the Old World, and at the time the American Dermatological Association was formed, in 1876, about one third of the charter members had obtained their training in that way. However, no definite duration or content of such training was accepted as a measure of their competency in this special field. These dermatologists gradually took younger men into their offices as assistants for varying periods, and clinics where dermatologic experience could be obtained were developed in this country. At the time of World War I and thereafter, graduate training in dermatology progressed rapidly without uniform standards, for there were differing periods of time and instruction given under various chiefs in different clinics and in different cities. Interest, ability and personality still were the important factors, and it was the doctor who decided whether he was competent to practice his specialty. In other words, until 1932 there were no particular standards to be met in training for the practice of dermatology. Graduate instruction was an individual matter, perhaps serving under a former teacher, gaining experience in a large clinic or going abroad for a period. Those who could afford it went abroad, but the period of stay varied perhaps from six months to three years. Often the mere fact of having spent time abroad, rather than ability or competence, was considered of importance in establishing a physician as a specialist. They could claim to be specialists without good or even mediocre training.

Then, about 1932, when there were rumors of possible state licensure of specialists, perhaps controlled by

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a state authority or a state medical association, it was considered preferable that certain standards be established by dermatologists on a voluntary basis to determine the competency of physicians for practicing the specialty. Such a step had been taken by the ophthalmologists in 1915 and by the nose and throat specialists and the obstetricians more recently.

With the support of the American Dermatological Association and the Section on Dermatology and Syphilology of the American Medical Association, a board of certification was set up for the specialty. Their first duty, and their continual duty ever since, has been the establishment of standards of various kinds with the main general purpose of improving the quality of practice in dermatology and syphilology in this country. There are many phases of this main purpose which are worth reviewing in more detail at this time.

STANDARDS FOR PERSONS ENTERING DERMATOLOGY

At the very beginning it seemed necessary to adopt some general standards by which physicians already established in dermatology could be recognized as having attained competency in the field. After much discussion three criteria were accepted. It was considered that those who had limited their practice to the specialty for a minimum of fifteen years should be competent; second, that those who had attained the rank of professor in a recognized medical school should be competent, and third, that those who had been investigated by the Committee on Membership of the American Dermatological Association and accepted as members should be competent. Any physician with one of these qualifications who had had good training in dermatology and syphilology and was limiting his practice to the specialty was thought to be competent in the diagnosis and treatment of diseases of the skin and competent to act as a consultant when needed. It was taken for granted that their qualifications should include such items as high ethical and professional standing, graduation from an approved medical school and licensure by an individual state or by the National Board of Medical Examiners. Such standards, of course, were to apply to all aspirants.

Much study was given not only to the duration of adequate training but especially to the content of the training period, and much time was consumed and many drafts were made before a "Syllabus of Graduate Training in Dermatology and Syphilology" was issued. This booklet attempted to outline the field to be covered in instruction, but at the same time to provide freedom for the chiefs of departments in the details and methods of actual instruction. It was realized that it would be impractical to standardize a graduate curriculum in all its details for every single graduate department in view of the varying conditions in different medical schools and the fact that excellent dermatologists have been trained under various systems.

In determining whether certain standards of proficiency for groups other than the aforementioned ones are fulfilled, it is inevitable that tests or examinations be developed, undesirable as they may seem. While tests are of value in determining the competency of such physicians, it seemed advisable to establish standards of eligibility for the examinations. Two groups were decided on: first, dermatologists with a satisfactory period of training and ten years or more of limitation of practice to dermatology and, second, those in the field of dermatology for five years. While the first group has been discontinued, I raise the question whether consideration should be given to the reestablishment of this group as a method of providing experienced dermatologists safe for practice and consultation. It seems possible that some method can be found which would weed out those who are not proficient; the greater experience and longer study by these physicians can provide an excellent background for specialization. A standard for the younger group who had practiced dermatology for five years was a definite period of training and a written and oral examination. This training period at first consisted of two full years, with at least one year in a well recognized clinic or as an assistant in the private practice of a well known specialist in the field. By 1935 there was added to this standard an internship of not less than a year in a hospital approved by the Council on Medical Education and Hospitals of the American Medical Association, on the ground that the better the knowledge of general medicine is, the better the background for the practice of any specialty. Later the three year period of training was adopted as a minimum in which a good student could acquire a satisfactory background for competency as a specialist in dermatology and as a consultant.

The more careful selection of graduate students and residents who desire to specialize in dermatology and a decision not to accept them simply because of their interest in the subject, though interest is necessary, together with an attempt to attract well trained physicians into cutaneous medicine both in the clinical phases and the basic fields will, in my opinion, contribute most to the advancement of standards in dermatologic practice.

STANDARDS FOR INSTITUTIONS WHERE GRADUATE TRAINING WILL BE CONDUCTED

By 1935, or even earlier, there was concern over those institutions which could provide a satisfactory "two full years of special training devoted exclusively to dermatology and syphilology." At that time these facilities were reviewed—the first survey of dermatologic training facilities in the country. When the three year plan of training was under serious consideration, it seemed necessary to set up certain standards to be attained by institutions planning a satisfactory three year training period in dermatology. Although rigid specifications could not be set, it was determined that such institutions would probably be found to have the following qualifications: a university affiliation; a satisfactory program of instruction in the basic fields related to the specialty; proper supervision of students; a well formulated teaching program; adequate provision for dermatologic bed patients; at least 1,000 new patients a year in the outpatient clinic; adequate equipment; satisfactory laboratory and investigative facilities; satisfactory medical library facilities; a chief who has been certified by the Board and who has the rank of professor or its equivalent in an approved medical school, and the majority of the members of the staff certified by the Board.

The evaluation of such institutions and their facilities has been accomplished by a cooperative study by the Board and the Council on Medical Education and Hospitals of the American Medical Association.

More recently standards for institutions have been reviewed, and all the institutions in the country in which physicians are trained in dermatology and syphilology have been reconsidered and classified with

regard to the type of training provided. This survey has been completed so that the status of all institutions training graduate students in dermatology is now definitely established. The standards adopted in the previous survey were in general applied in this classification, and perhaps somewhat more strictly.

STANDARDS FOR PRECEPTORS

It has always been recognized that excellent training could be obtained by a young physician working in the office of an older physician with a large experience, and provision has been made for such training in a portion of both the two year and the three year training period. As time went on, more thought was given to the difficult matter of standards for this type of training; about 1942 there was begun a more formal consideration of dermatologists who could be considered as preceptors or as qualified to train students adequately in dermatology and syphilology. It was believed best that only one year of the three years of training should be spent under such a preceptor, but this time might be spread over two years, the student working in the preceptor's office for half of the day and in an approved institution for the other half. It was believed that such a preceptor should be a certified specialist, competent to supervise the training of a candidate either in his office or in a recognized clinic or laboratory. It seemed obvious that the preceptor's office should have adequate equipment for satisfactory instruction in diagnosis and therapy, that he should have an adequate number of patients for teaching purposes, that sufficient time should be arranged for conferring about such patients and that opportunities should exist for investigation as well as for discussion of individual patients. Such standards seemed definitely necessary in order to provide adequate instruction and to ascertain that the student really had the opportunity to acquire knowledge and did not spend too great a proportion of his time on routine office practice for his preceptor. In regard to preceptors, and for that matter instructors of dermatology in general, some provision should be made for exposure at least to the matter of the technic of teaching. Some men are naturally good teachers, others are poor teachers, but too many young assistants and instructors are turned loose on students without adequate instruction in the exact material to be taught, the arrangement of the material, the technic of presentation and the use of cases, charts, diagrams and tables. Some type of affiliation with the department of education of a university, or at least conferences with a successful teacher, could contribute much to the efficiency of instruction in dermatology as well as in other subjects.

STANDARDS FOR MILITARY SERVICE

During the latter part of World War II there was considerable discussion concerning the training and experience which a dermatologist might have obtained in the Army, Navy or Public Health Service during the war. What could be called training and what experience? This factor was considered in terms of credit which the young dermatologist would receive toward eligibility for examination. It was decided that he would receive full credit for any satisfactory dermatologic training already completed when he received his commission. He would also be credited with one year of the two years' required experience after having served one year of military medical service. However, it was determined that the extent to which medical experience in the Army or Navy would count toward required training would have to be decided in each case on evidence submitted by the medical officer. There was such a wide variation, it was found, in the conditions of dermatologic services in the Army, Navy and Public Health Service that no general standards could be adopted which would be satisfactory.

UNDERGRADUATE STANDARDS

There is now under way a survey of undergraduate dermatologic training to determine its adequacy in properly preparing the student for general practice, to determine its place in the curriculum and to determine the best methods of teaching, with the hope that eventually standards of undergraduate instruction will be improved with a resultant betterment of cutaneous diagnosis and therapy in general practice.

In addition, various postgraduate assemblies over the country, in which dermatologists have presented the latest developments to general practitioners, have also contributed much to improving the standards of dermatology in general practice.

It is my opinion that if this is not to be a nation of specialists and if the general practitioner is to have adequate knowledge to deal with cutaneous abnormalities, the student will need to have a more adequate amount of time in the curriculum for dermatologic subjects and adequate instruction to be able to manage the commoner diseases of the skin, that is, at least 85 per cent of cutaneous manifestations. In my opinion, present undergraduate standards of dermatologic instruction in numerous schools are not high enough to enable graduates to diagnose and manage properly the majority of cases of cutaneous disease.

ADDITIONAL ITEMS AFFECTING STANDARDS OF PRACTICE

In addition to such standards for individuals and institutions, other factors have contributed to improvement in the practice in dermatology. Since the establishment of the American Academy of Dermatology and Syphilology in 1938 much has been accomplished in two ways: first, by the courses and symposiums conducted as a part of the educational program; second, in the presentation of material by distinguished physicians in other fields to dermatologists. This association has accomplished much in the way of improving the standards of practice in dermatology. The Section on Dermatology and Syphilology and the Society for Investigative Dermatology have also contributed much by their careful selection of presentations for their annual meetings from the large number of applications and by providing forums for the discussion of many phases of dermatology. The many local and sectional societies deserve much credit for contributing to the maintenance of dermatologic standards. Various courses given in different parts of the country—pathology, mycology—have been immensely valuable in raising the standards in these subjects.

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COMMENT

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But what of the future? Not only is it true of the medical student, but of the dermatologic graduate student, that the time is approaching, if not already reached, when the amount of material to be taught will be so vast and complicated that the student will be unable to properly digest it all. In the development of future standards, therefore, it will be necessary to sift out the details and data which must be taught and to emphasize to a greater degree the means and methods by which rational conclusions on problems may be reached and the procedures by which the desired information can be readily acquired in dealing with the many diagnostic, therapeutic and preventive problems which concern the dermatologist today.

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JOSEPH H. GLOBUS, M.D.
and
JEROME L. KOHN, M.D.
New York

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regard to the type of training provided. This survey has been completed so that the status of all institutions training graduate students in dermatology is now definitely established. The standards adopted in the previous survey were in general applied in this classification, and perhaps somewhat more strictly.

STANDARDS FOR PRECEPTORS

It has always been recognized that excellent training could be obtained by a young physician working in the office of an older physician with a large experience, and provision has been made for such training in a portion of both the two year and the three year training period. As time went on, more thought was given to the difficult matter of standards for this type of training; about 1942 there was begun a more formal consideration of dermatologists who could be considered as preceptors or as qualified to train students adequately in dermatology and syphilology. It was believed best that only one year of the three years of training should be spent under such a preceptor, but this time might be spread over two years, the student working in the preceptor's office for half of the day and in an approved institution for the other half. It was believed that such a preceptor should be a certified specialist, competent to supervise the training of a candidate either in his office or in a recognized clinic or laboratory. It seemed obvious that the preceptor's office should have adequate equipment for satisfactory instruction in diagnosis and therapy, that he should have an adequate number of patients for teaching purposes, that sufficient time should be arranged for conferring about such patients and that opportunities should exist for investigation as well as for discussion of individual patients. Such standards seemed definitely necessary in order to provide adequate instruction and to ascertain that the student really had the opportunity to acquire knowledge and did not spend too great a proportion of his time on routine office practice for his preceptor. In regard to preceptors, and for that matter instructors of dermatology in general, some provision should be made for exposure at least to the matter of the technic of teaching. Some men are naturally good teachers, others are poor teachers, but too many young assistants and instructors are turned loose on students without adequate instruction in the exact material to be taught, the arrangement of the material, the technic of presentation and the use of cases, charts, diagrams and tables. Some type of affiliation with the department of education of a university, or at least conferences with a successful teacher, could contribute much to the efficiency of instruction in dermatology as well as in other subjects.

STANDARDS FOR MILITARY SERVICE

During the latter part of World War II there was considerable discussion concerning the training and experience which a dermatologist might have obtained in the Army, Navy or Public Health Service during the war. What could be called training and what experience? This factor was considered in terms of credit which the young dermatologist would receive toward eligibility for examination. It was decided that he would receive full credit for any satisfactory dermatologic training already completed when he received his commission. He would also be credited with one year of the two years' required experience after having served one year of military medical service. However, it was determined that the extent to which medical experience in the Army or Navy would count toward required training would have to be decided in each case on evidence submitted by the medical officer. There was such a wide variation, it was found, in the conditions of dermatologic services in the Army, Navy and Public Health Service that no general standards could be adopted which would be satisfactory.

UNDERGRADUATE STANDARDS

There is now under way a survey of undergraduate dermatologic training to determine its adequacy in properly preparing the student for general practice, to determine its place in the curriculum and to determine the best methods of teaching, with the hope that eventually standards of undergraduate instruction will be improved with a resultant betterment of cutaneous diagnosis and therapy in general practice.

In addition, various postgraduate assemblies over the country, in which dermatologists have presented the latest developments to general practitioners, have also contributed much to improving the standards of dermatology in general practice.

It is my opinion that if this is not to be a nation of specialists and if the general practitioner is to have adequate knowledge to deal with cutaneous abnormalities, the student will need to have a more adequate amount of time in the curriculum for dermatologic subjects and adequate instruction to be able to manage the commoner diseases of the skin, that is, at least 85 per cent of cutaneous manifestations. In my opinion, present undergraduate standards of dermatologic instruction in numerous schools are not high enough to enable graduates to diagnose and manage properly the majority of cases of cutaneous disease.

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of vaccination against whooping cough, Toomey [5] sent out a questionnaire to a large number of pediatricians in several parts of this country and received information on 38 well authenticated instances in which children had convulsions after receiving an injection of pertussis vaccine; of these at least 23 recovered completely but 2 died.

It is not without significance that, with few exceptions, convulsive seizures and lethargy dominate the clinical manifestations in the affected child. These are often coupled with other features indicative of grave damage to the brain.

Two infants have recently been observed at the Mount Sinai Hospital who manifested symptoms and signs of cerebral involvement after the injection of pertussis vaccine. One child had received the standard fluid vaccine, but the other was given the vaccine known as pertussis antigen (a detoxified formolized filtrate). In the first case, the acute symptoms subsided but the child was left with well defined residuals from which he apparently is making an exceedingly slow recovery. In the second case the clinical course was that of progressive decline until death. The alarming character of this reaction to a widely employed prophylactic agent prompted us to report the following 2 cases.

REPORT OF CASES

Case 1.—*History.*—R. W., a male infant aged 9 months, was brought to Mount Sinai Hospital Jan. 10, 1949. Three months previously (Nov. 8, 1948) the child was given a second injection of pertussis vaccine and shortly thereafter became alternately irritable and drowsy; for the first time since birth he slept through the entire night. There was no rise in temperature. An abrupt change in the child's behavior was noted by his mother. Before the second injection he had played and reacted normally, but afterward he no longer played, would not reach out for objects, became indifferent to his environment and slept for long intervals during the day. On the tenth day after the second injection he was seized by repeated convulsions, which were characterized by an abrupt development of slow clonic movements of the head and the left arm. These attacks would last about five minutes and recur every two hours during the first few days. After such episodes the child appeared stuporous.

Examination.—The child was able to sit up. He was irritable but paid no attention to his surroundings and did not reach for objects. When one was placed in front of him he would only gaze at it. The right pupil was larger than the left and was fixed to light. Otherwise the neurologic examination revealed normal conditions. A psychometric investigation indicated that the child's development of coordination was roughly in keeping with his chronologic age. However, response to persons was definitely abnormal; he would show no sign of recognition. There was no response to play, sound or light, although apparently perception was present. The circumference of the head was 17 inches (43 cm.).

Course.—An electroencephalogram which was made Jan. 15, 1949 showed diffuse cerebral dysfunction regarded as consistent with the diagnosis of postencephalitic (vaccine) encephalopathy.

Electroencephalography was repeated on January 26, and the record was like that seen in convulsive disorders. The child seemed to improve and was given glutamic acid. The convulsive episodes continued to recur once every two days.

A third electroencephalogram was made February 6 and was reported to show a fairly normal record. A neurologic reinvestigation on February 9 "showed no evidence of mental deficiency and no paralysis." The diagnosis was encephalopathy, cause unknown.

Further improvement was recorded on February 21. A pneumoencephalogram at this time was considered to show normal conditions except for the absence of air over the cortex. Another psychometric study was made on March 1, and the report stated: "Although mentally the child seems to be normal, it is difficult to attract or hold his attention. The abnormalities are emotional."

There was no elevation of temperature at any time. Blood chemical studies, serologic examination and the blood cell count were within normal limits. The cerebrospinal fluid was normal.

The child left the hospital on March 5, 1949. He has been seen several times in the follow-up clinic. When examined on May 5, he seemed to have made some further gain during the preceding month. The convulsive episodes now occurred about once every three or four days and lasted about ten minutes. After each episode the child was listless and slept most of the day, but the following day he was more alert. He walked about in his playpen, played to a limited degree and seemed to be more aware of persons and his surroundings. Electroencephalography was repeated and was reported to reveal normal conditions. When the child was seen again on May 28, his mother reported further improvement, except that he had peculiar sleeping habits: he would sleep from 1 p. m. until 1 a. m., remaining awake the rest of the time.

The clinical course in this case justified the diagnosis of postvaccinal (possible allergic) encephalopathy and allows of the conclusion that in this instance the disease process was to a degree a reversible one. It is as yet too early to say whether there will be a complete return to normal development.

Case 2.—*History.*—P. L., a male infant aged 8 months, who was developing normally except for recurrent infections of the upper part of the respiratory tract, entered the Mount Sinai pediatric service on Sept. 26, 1948, because of convulsions and stupor of six hours' duration. Six weeks before admission he had received the first injection of pertussis antigen vaccine (lot 1905-48 F. of a detoxified formolized filtrate). He immediately reacted by a rise of temperature, and he soon became irritable. This irritability, which lasted for two weeks, was attributed to a cold. His mother reported this reaction to the attending physician. Nevertheless, a second injection of the same vaccine was given to the child on the day preceding his admission to the hospital. After he received this injection he fell asleep. Three hours later he awakened and cried throughout the remainder of the night. There was no febrile reaction. Eighteen hours after the second injection he passed through a generalized convulsion, which lasted about half an hour and was followed by stupor.

Examination.—The patient was a well developed infant, who was lying listlessly in bed, totally unresponsive. The head circumference measured 18 inches (45.7 cm.). There was a profuse nasal discharge. The lungs were clear. The heart was normal. The pupils reacted to light. The fundi were normal. While being examined he passed through a generalized convulsion.

Laboratory Data.—A lumbar puncture yielded normal cerebrospinal fluid, under normal pressure. The blood sugar was 40 mg. and the serum calcium was 9.6 mg., per hundred cubic centimeters. Reactions to all serologic tests were within normal limits.

Course.—The child was placed under an oxygen hood and given dextrose and calcium intravenously. The convulsions persisted until intravenous amobarbital sodium was administered. Several hours after admission the temperature rose to 105 F., and it remained at this level for the next three days. The child's general condition remained unchanged, and because of his stuporous condition he had to be fed by gavage. On the sixth day in the hospital his fontanel was observed to be bulging. A bilateral subdural tap did not yield fluid. Electroencephalography revealed no organic pattern and was interpreted as indicating a severe depression of cerebral function.

On the eighth day a neurologic examination did not show localizing neurologic signs except for decerebrate rigidity. It was assumed that there was a diffuse involvement of the brain, which was most probably in the nature of an anaphylactic reaction. Repeated subdural taps did not reveal free fluid; the cerebrospinal fluid was normal. On the twelfth hospital day

5. Toomey, J. A.: Reactions to Pertussis Vaccine, J. A. M. A. 139: 448 (June 4) 1949.

signs of increased intracranial pressure appeared; the disk margins were found to be blurred, and roentgen examination of the skull revealed separation of the cranial sutures. Magnesium sulfate was given intramuscularly without apparent effect. At this time the electroencephalogram disclosed an almost entirely flat record, indicating almost complete suppression of cerebral function. On the seventh hospital day a ventricular tap was performed; 35 cc. of clear cerebrospinal fluid was removed; the communication between the ventricles and the lumbar intrathecal space was free. On the twenty-fifth day the child's temperature began to rise; it remained at a high level until his death, which occurred on the thirtieth hospital day. The patient remained comatose throughout his stay in the hospital. Four days before death an intradermal test was performed. The injection of vaccine elicited no reaction.

Necropsy Observations.—General: These were summarized as: cardiac hypertrophy; pulmonary edema and atelectasis, and focal necrosis of the liver.

The Brain: The brain was extremely soft, and during examination (even after fixation) became so distorted that it was difficult to make out surface markings on the cerebral hemispheres. The cerebellum and the brain stem retained a fairly normal consistency, and their surface markings remained intact.

Microscopic Observations: The cerebral cortex was entirely devoid of its normal architecture; no cortical lamellation could be recognized. Practically no nerve cell had retained its normal structure: the nucleus had lost its characteristic appearance, the tigroid substance was no longer present and the external configuration of the cell assumed a rounded outline of the abundant but poorly staining cytoplasm. Most striking was the widespread and copious accumulation of macrophages, which when stained with scarlet red exhibited large collections of fat granules. These cells, which served as evidence of a disintegrating, degenerative process, were found in the cortex as well as in the subcortex. They were less numerous in the cerebellum and brain stem. Fat particles were encountered also in the spinal cord and the spinal roots, in Marchi (osmic acid) preparations.

Significant was the total absence of vascular changes. Perivascular lymphocytic infiltrations were not seen anywhere, and necrotic changes in vessels or hemorrhages were not encountered.

The clinical manifestations in this case, severe from the onset, progressive and leading ultimately to death, are in full accord with the postmortem observations, pointing to a widespread, almost massive disintegration of the brain, affecting particularly the forebrain.

The absence of inflammatory alterations or necrotic changes in blood vessels, and the exclusively degenerative character of the anatomic changes in the cerebrospinal system, justifies the conclusion that in this instance the disease process was one that can be grouped with the primary degenerative encephalomyelopathies —hence, not an encephalitis in the usually accepted sense of the term.

COMMENT

From the foregoing it is obvious that the nervous system of the affected children reacted directly to the introduced foreign body, in these instances to the pertussis vaccine. The reaction, which was almost always alarming in the early phase, was reversible in 1 of our 2 cases but grave and fatal in the other.

In no instance was there an untoward reaction in other children who received injections of material with the same lot number of the pertussis antigen or the fluid vaccine.

The cause of this grave reaction is still undetermined, and several etiologic factors[6] are being considered: (1) a constitutional reaction inherent in the affected child; (2) an intravenous spread of the injected vaccine; (3) the action of pyrogens liberated by bacterial organisms; (4) damage to cerebral vessels caused by a toxin probably present in pertussis vaccine, and, finally, (5) an antigen-antibody response to previous specific desensitization.

It is apparent that no final conclusions can as yet be drawn from the observations on our own material, although the neuropathologic alterations, primary degenerative in nature, seem to point in the direction of an antigen-antibody reaction as a causative factor.

6. Miller, J. J., Jr.: Experimental Observations in Antigenic Potency of H. Pertussis Extracts, J. Immunol. **26**: 247, 1934. Evans, D. G., and Maitland, H. B.: Preparation of Toxin of H. Pertussis: Its Properties and Relation to Immunity, J. Path. & Bact. **40**: 715, 1935. Wood, M. L.: Filtrable Toxic Substances in Broth Cultures of H. Pertussis, J. Immunol. **39**: 25, 1940.

SUMMARY

Two cases are described in which manifestations of cerebral involvement followed inoculation with pertussis vaccine. In 1 instance the reaction was at least partly reversible, but in the other there was a fatal termination. In the latter instance postmortem investigation revealed anatomic changes of a diffuse, primary, degenerative nature in the brain. These histologic features, noninflammatory in character, suggest the probability that an allergic form of encephalopathy was caused by an antigen-antibody reaction.

RESULTS OF CLASSIC OPERATIONS FOR DUODENAL ULCER

Five to Ten Year Follow-Up in Five Hundred and Thirty-Two Cases

HOWARD K. GRAY, M.D.
and
RUSSELL R. WILLIAMS Jr., M.D.
Rochester, Minn.

During the decade preceding the revival by Dragstedt and his co-workers of interest in section of the vagus nerves, there was not widespread unanimity regarding the indications for the operative treatment of patients suffering from a duodenal ulcer. Various principles had been established, and there had not been general agreement as to the type of operative procedure that was indicated in each type of case, although diverse sentiment did crystallize into a rather consistent pattern prior to the clinical reapplication of vagotomy. Within the three years previous to this report, conflicting reports pertaining to results of vagotomy have appeared in the medical literature and have incited unbounded enthusiasm for the procedure on the part of some persons and complete abandonment of the procedure by others. Between these extremes, a large number of physicians and surgeons have reached no definite conclusions but are maintaining an open mind until sufficient time has elapsed to permit a reasonable appraisal of the value of vagotomy alone and in conjunction with other associated surgical procedures such as pyloroplasty, gastroenterostomy and gastric resection. Sufficient time will have elapsed within the near future to accomplish this appraisal, and it is for this reason that it would seem appropriate at this time for many surgeons to review and place on record the results of classic operations for duodenal ulcer in order that there may be afforded the opportunity for all to compare these results with impartiality.

It was with this purpose in mind that an attempt was made to determine as accurately as possible the results

From the Division of Surgery, the Mayo Clinic (Dr. Gray), and Fellow in Surgery, the Mayo Foundation (Dr. Williams).

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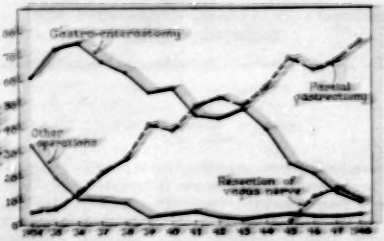
of operations for this condition in a series of 532 consecutive cases in which operation for duodenal ulcer was performed by one of us (H. K. G.) in the five year period from 1937 to 1941, inclusive. Satisfactory information was obtained in 388 of these cases. The selection of a group of patients on whom the operation had been performed by one surgeon was made deliberately, as it was felt that a more personal follow-up would result in greater accuracy and that the indications for a particular surgical procedure and the technical details of the operation would have been reasonably consistent. No patient had undergone the operation less than five years or longer than ten years prior to the study. If patients succumbed during the period between the operation and the date of this study from the effects of the original lesion or its complications, the results were classified as unsatisfactory. Patients who succumbed less than five years after the operation from unrelated causes were excluded from the study.

An evaluation of the condition of each patient's general health was attempted, and a definite statement was elicited as to whether the symptoms of the ulcer were completely relieved, partly relieved or not relieved by operation. The inquiry was directed toward obtaining



Operations for duodenal ulcer performed at the Mayo Clinic in the fifteen year period from 1934 through 1948.

data on particular postoperative symptoms, such as pain, nausea, vomiting, hemorrhage and gain or loss of weight. Whether or not the patient had been able to return to his or her usual occupation was determined, and the period of enforced layoff was computed. When further medical or surgical treatment for the ulcer or for complications arising after the operation had been necessary, an attempt was made to obtain the essential details of this treatment. The correlation of these subjective findings with such factors as the sex and age of the patient, the clinical history, the pathologic data at the time of operation and the type of operative procedure carried out was made in an effort to ascertain the set of circumstances that apparently offered the best chance of a satisfactory result and by the same token to determine, if possible, the underlying causes of an unsatisfactory result.

In attempting to evaluate the efficacy of the surgical treatment of duodenal ulcer in a particular series of patients it would seem reasonable to review the indications for operative intervention and for certain operative procedures that obtained at the time the operations were performed. Only by so doing is it possible to interpret follow-up results and to profit by apparently erroneous practices. The series under discussion presented an interesting and extremely difficult problem, for both the accepted criteria for surgical intervention for duodenal ulcer and the adaptation of selected surgical procedures to its therapy had begun to undergo rapid change only a few years prior to 1937. The experience at the Mayo Clinic apparently has been representative of all but a relatively few groups and may be illustrated numerically. Whereas, in 1931, 26 per cent of the patients for whom a diagnosis of duodenal ulcer was made submitted to surgical treatment, only 13 per cent were operated on in 1945 and approximately the same percentage in subsequent years. Gastroenterostomy was performed on 61.6 per cent, partial gastrectomy was done on 5.2 per cent and a plastic operation at the outlet of the stomach was performed on 33.2 per cent of patients in 1934. Indications for selected operative procedures changed rapidly and consistently during the next fifteen years, so that the figures for 1948 showed that partial gastrectomy was performed on 76.2 per cent of patients, gastroenterostomy on 9.3 per cent and pyloroplasty and other miscellaneous procedures on 4.0 per cent. Vagotomy was utilized alone or in conjunction with one of the other three procedures for 10.5 per cent of all patients who underwent operation in 1948. The accompanying graph indicates the changes in the fifteen year period. To attempt to explain the reasons for such a drastic alteration in the management of these patients is beyond the scope of this communication. Suffice it to say that pronounced improvement by clinicians in the conservative treatment of patients with duodenal ulcer reduced the number for whom surgical treatment was the only possibility and thus automatically presented the surgeon with a complicated problem in practically every case. A widespread impression had been held that any obstruction at the outlet of the stomach was sufficient evidence to warrant performing gastroenterostomy, irrespective of the age of the patient and the degree of activity in the ulcer. The development of ulceration near the gastroenteric stoma in a prohibitively high percentage of cases was then recognized, and a trend away from gastroenterostomy toward a more radical form of therapy became vividly apparent. The graph indicates that it was not until 1941 that the number of partial gastrectomies equaled the number of gastroenterostomies and that, for the last several years, the ratio of these two procedures has remained rather constant, at approximately 3:1. Table 1 includes data on all patients in the series.

The most conservative operation—that is, pyloroplasty—was reserved for the youngest group of patients, and in most instances the procedure was carried out for a minimal lesion that could be mobilized readily. Resection was done for a group of patients for the most part in the late thirties, whereas gastroenterostomy was utilized for a group of patients whose average age was greater by approximately fourteen years than that of the previously mentioned groups. The few Devine excision operations were done only as a matter of expediency for the older patients who had experienced episodes of massive hemorrhage and for whom a more radical procedure would have imposed a prohibitive risk. The ratio of men to women was 87:13.

An attempt to evaluate the condition of the patients' general health at the time of the operation did not reveal any remarkable differences in the two major groups. The average number of units of free hydrochloric acid before operation in the fasting contents of the stomach was 55 for the patients who underwent resection and

49 for the patients for whom gastroenterostomy was performed. The preoperative average quantity of hemoglobin per hundred cubic centimeters of blood was remarkably constant at 13.5 (plus or minus) Gm. in the two significant groups.

Data on the deaths in the series are given in table 2. Consideration of the causes of death in the two groups of patients for whom resection was done disclosed no significant factor that would suggest that one procedure offered any greater degree of safety than the other. The two sets of data represent patients with different pathologic manifestations of duodenal ulcer and cannot be compared statistically. It is our opinion, however, that exclusion of a deeply situated ulcer of the posterior wall is a safer procedure than attempting to remove it, thus jeopardizing the structures in the region of the ampulla of Vater which may be drawn up into close proximity to the ulcerated area. Two duodenal fistulas developed in the former group, but both healed spontaneously in a short time. Two deaths from peritonitis (the suture lines were intact) and 4 from pneumonia conceivably might have been avoided had the modern chemotherapeutic agents been available at the time these operations

TABLE 1.—*Data on All Patients Operated on for Duodenal Ulcer (1937-1941)*

		Type of Operation						
		Resection, Including Ulcer (Posterior Polya)	Resection, Excluding Ulcer		Posterior Gastroenterostomy	Pyloroplasty	Device Exclusion	Totals
	Sex		Posterior Polya*	Anterior Polya				
Number of patients	M	49	125	7	243	30	4	461
	F	9	10	0	45	7	0	71
Average age at time of operation, years	M	40.1	38.6	37.7	52.4	35.9	61	...
	F	33.8	40.1	..	50.9	37.0	..	...

* Includes 1 Hofmeister-Polya type operation.

were performed. Three deaths from uremia, 2 from postoperative hemorrhage and 1 each from coronary occlusion, pulmonary embolism and ulceration of the colon were recorded.

Several striking figures are apparent in table 3. That so high a percentage of patients in all categories were symptom-free following the operation is gratifying, but the high percentage of those whose condition became worse is most distressing. In the group in which the ulcer was included with the resected portion of the stomach, no further surgical procedure was required. In 6 patients (3.5 per cent) of the group in which the ulcer was excluded, lesions developed for which additional surgical treatment was indicated. At the time of the second operation, there were 4 diagnoses of gastrojejunal ulcer (1 with colonic fistula) and 2 of gastrojejunitis. Seventeen patients (5.9 per cent) in the group in which the original operation was a gastroenterostomy underwent a secondary operation for gastrojejunal ulcer, and 6 patients (2.1 per cent), for a malfunctioning gastroenteric stoma. Further surgical treatment was necessary for 24 per cent of the group who underwent pyloroplasty.

It would be assumed that the majority of the patients in whom gastrojejunal ulcers developed after gastroenterostomy were young and showed gross evidence of an active duodenal ulcer, and such was the case. Three patients were in the third decade (aged 24, 29 and 29), 1 patient was 38, 6 patients were in the fifth decade (aged 40, 42, 46, 46, 48 and 49), 5 patients were in the sixth decade (aged 52, 53, 53, 56 and 58), 1 patient was 61 and 1 was 67. Only 4 patients in the entire group in which a stomal ulcer developed were over 55.

TABLE 2.—*Hospital Mortality Rates for Patients Operated on for Duodenal Ulcer**

	Type of Operation						
	Resection, Including Ulcer (Posterior Polya)	Resection, Excluding Ulcer		Posterior Gastroenterostomy	Pyloroplasty	Device Exclusion	Totals
Deaths		Posterior Polya	Anterior Polya				
Number.....	3	8	0	3	0	0	14
Per Cent.....	5.9	4.8	..	1.0	..	..	2.6

* Includes emergency operations for active massive hemorrhage.

In 5 cases, symptoms suggesting a jejunal ulcer developed within a year after operation; in 4, within two years; in 2, within three years; in 4, within 4 years; in 1, within five years, and in 1, not until seven years after gastroenterostomy had been performed. The shortest time interval between operation and the development of the symptoms of a stomal ulcer was two weeks, in the case of a man aged 42, and the longest interval was seven years, in that of a man of 48. Although there were only 45 cases of women for whom gastroenterostomy was performed, it is significant that in none did a stomal ulcer develop, so far as could be determined.

The ages of the men in the cases in which a stomal ulcer or gastrojejunitis requiring operative intervention developed after partial gastrectomy ranged from 30 to 52. Three were 30, 31 and 39, respectively, 1 was 40 and 1 42, and 1 was 52 when the first operation was performed. In 4 cases, symptoms suggestive of stomal ulceration developed within the first year after the gastric resection was done; in 1, in the second year, and in 1, approximately five years after the operation.

TABLE 3.—*Results of Operations for Duodenal Ulcer*

	Type of Operation					
	Resection, Including Ulcer (Posterior Polya)	Resection, Excluding Ulcer		Posterior Gastroenterostomy	Pyloroplasty	Device Exclusion
Results of Operation		Posterior Polya	Anterior Polya			
Complete relief...	82*	77	85	72	30	75
Partial relief.....	13	9	15	5	47	25
No relief.....	0	2	0	1	0	0
Condition worse †	4	12	0	22	23	0

* All numbers indicate the percentage of patients in each category of results for each type of operation.
† Includes, in addition, the percentage of patients who died and those for whom subsequent operations were required.

COMMENT

As was suggested in the introductory comments to this communication, this review of a series of 532 consecutive cases in which the patients underwent operations for duodenal ulcer in the five year period from 1937 to 1941, inclusive, was undertaken in order to place on record the results of the classic operations for duodenal ulcer five to ten years after operation and,

thus, to afford an additional basis for comparison with a similar series in which the patients underwent vagotomy, alone or in conjunction with one of the classic operations, after a similar period has elapsed.

A second purpose was to attempt to ascertain the set of circumstances that apparently offered the best chance of a satisfactory result, and by the same token to determine, if possible, the underlying causes of an unsatisfactory result. On the basis of our impressions, it would seem appropriate to say that uncomplicated duodenal ulcer should be considered a "medical disease." For the most part, surgical treatment should be reserved for its complications. Those patients who have an uncomplicated duodenal ulcer should undergo an adequate trial of rigid conservative treatment before the possibility of surgical intervention is even considered. That some of these patients will have to undergo operation sooner or later is admitted, but evidence has been made available suggesting that approximately 80 per cent of patients who have the disease can be managed satisfactorily with conservative treatment. In the light of our present knowledge, therefore, it would appear that many of the patients in this series could have been treated satisfactorily without resort to surgical intervention if our modern methods of treatment had been available. The complications of duodenal ulcer which would seem to require surgical intervention are perforation (acute, subacute or chronic), cicatricial pyloric obstruction, hemorrhage (particularly in patients beyond the age of 55), intractability on a well formulated medical regimen or any combination of these factors.

Our impressions from this study suggest that if surgical intervention cannot be avoided and if the classic procedures are to be employed, gastroenterostomy is indicated for patients over 55 who have a long-standing ulcer with relatively low gastric acidity and with symptoms due primarily to cicatricial pyloric obstruction. The low operative risk imposed makes this operation particularly useful for this group of older patients, in which concurrent disease increases the risk of any surgical procedure. Partial gastrectomy should be reserved for the most part for the patients under 55 who have relatively high gastric acidity and for whom all clinical evidence suggests an active ulcer. Although the age of the patient is an extremely important consideration, we feel that the arbitrary limit we have set is flexible and that sound surgical judgment, as exercised in individual cases, should not be replaced by dogmatic rules of conduct in the surgical treatment of the patient with duodenal ulcer.

ABSTRACT OF DISCUSSION

Dr. I. Ridgeway Trimble, Baltimore: The great value of this paper stems from three sources: (1) its timeliness; (2) the postoperative period of five years or more which has been permitted to elapse before the report was initiated, a most refreshing change in these days when a patient's progress is in the press almost before his abdomen is painted with iodine solution, and (3) the study and interpretation of the cases under the guidance of a man with the surgical ability and the intellectual honesty of Dr. Howard Gray. In the enthusiasm which greeted Dragstedt's reintroduction of vagus resection, such caution as is shown in this paper was in many instances not exercised and the nerve operation was widely recommended for routine performance. Only after a series of disappointments did it become unequivocally clear that the interruption of the vagi was, in itself, unsatisfactory. Currently, even the most ardent proponents of vagus resection supplement it with a gastric drainage procedure, most often gastroenterostomy. However, there is ample evidence that the effects of vagus resection are transient and therefore incapable of protecting a gastroenteric stoma against the likelihood of ulceration, particularly in the young person with copious amounts of acid-pepsin juice. Perhaps the reactivation of gastric functions is a blessing in disguise, for it has occurred to me and to my associate, Dr. David Lynn, that the persistent inhibition of secretion might conceivably predispose the stomach to malignant transformation. This remote possibility was suggested by the frequency with which gastric carcinoma is associated with hypochlorhydria or achlorhydria and by the occasional appearance of gastric ulceration subsequent to vagus resection for duodenal ulcer. As far as I know, this is the first time that this possible complication of vagotomy has been mentioned. It would seem highly irrational to employ vagus resection in any but the occasional instance. I should like to ask Dr. Gray whether the gastric resection he performs at present is more extensive than was the case formerly; if so, what additional benefit has this provided? It would be important to know his criteria for an adequate resection and what effort is made to exenterate the antral mucosa when an exclusion modification is deemed necessary.

Dr. Harold D. Harvey, New York: It is a privilege to hear the results of the labors of a surgeon who has had such extensive experience in gastroduodenal surgery as has Dr. Gray. This report will be of great value to surgeons and internists alike, who want an honest, tangible basis for their treatment for peptic ulcer. Certainly, in order to be able to offer treatment to patients in the future, the physician must know the results of his efforts in the past. As Dr. Gray intimates, his report has to do not with 532 units that were all treated alike but with 532 human beings who were subjected to a changing mode of therapy. It is only by comparing reports from several large clinics and finding facts that are common to all of them that one can draw useful conclusions. Our own experience at the Presbyterian Hospital in New York coincides with that of Drs. Gray and Williams in two respects, the high proportion of good results that follow resection for peptic ulcer and the relative safety of gastric surgery at the present time. In regard to late results, we also found that approximately 85 per cent of the patients after resection for peptic ulcer had excellent effects, about 5 per cent had ill effects and the remaining 10 per cent had results that were satisfactory or not, depending on the standards by which they are judged. Our further study should be concentrated on the 5 per cent of patients who fared poorly. What distinguishes them from the others? Have they any factors in common that we can determine? In Dr. Gray's cases we note that about three fourths of the surgical failures involved posterior Polya resections, excluding the ulcer; yet we had come to the conclusion from our own records that posterior Polya resections resulted as well as anterior, and that leaving the ulcer in did not prejudice the patient's outlook, provided the antral and pyloric mucosa was removed. Was this mucosa resected in all of Dr. Gray's cases? Our own postoperative mortality rate for major operations on the stomach has fallen sharply since 1941. For over twelve years now, we have shown a 1 per cent mortality rate after elective resections for peptic ulcer among patients under 50 years of age, but we used to hesitate to perform the operation on the older patients. For the past three years even the older persons have been surviving, and that is important because about 40 per cent of our resections are performed on those over 50 years of age. As a result, in 1948 among 166 operations for peptic ulcer and its complications there was only 1 gastroenterostomy; we reserved vagotomy for marginal ulcers which followed resection and for a few other special cases, and we performed 129 resections, including 15 as emergency measures for control of acute massive hemorrhage. Among all these patients, 1 died.

DR. OTTO DE MUTH, Vancouver, B. C.: Two and one-half years ago my sister, Dr. Lillian De Muth of New York, and I wrote an article strongly condemning vagotomy as a cure-all for peptic ulcers. We praised Dr. Dragstedt, a man whom we respect and who has been an inspiration. However, we believe that he endorsed too soon a procedure that had not yet stood the test of time. The morbidity and mortality that has gone across this country and Canada and indeed around the world because of the hasty adoption of the vagotomy procedure has undone much of the good that the measure is capable of in properly selected cases in the future. We have a conscience in surgical practice, and we as professional persons must use it. Many surgeons are not qualified to do this type of work. Scratching around the fundus of the stomach is not doing a complete vagotomy. This is all to the good. The patient will be the better in the long run for the incomplete vagotomy. I will try to depict the manner in which we section the sphincter of Oddi. The instrument we use is now available to the members of the medical profession. We open the common bile duct and pass the instrument down; the knife comes out of the olive recess of the bulb and sections the sphincter. In the barrel of the instrument is the spring that keeps the knife in the recess of the bulb. (Bulbs are made in 5, 7 or 12 mm. sizes.) We take the instrument out and insert a catheter down the common bile duct; then with an aseptic syringe we run water through the catheter.

DR. HOWARD K. GRAY, Rochester: I had the pleasure several years ago of visiting Dr. De Muth when he was interested in the use of this instrument in the treatment of biliary dyskinesia, and I am most interested in the secondary use that he presented today. A great deal of discussion has arisen as to whether one is justified in excluding the ulcer when one performs a partial gastrectomy for duodenal ulcer. The series that I have presented to you has been divided into cases in which the ulcer has been excluded and those in which the ulcer has been removed in the course of resection. Perhaps I am an enthusiast in advocating exclusion of the ulcer when it is so deeply situated that any attempt to remove it may jeopardize vital structures in the region of the ampulla of Vater. In the occasional case in which transection of the stomach has been made proximal to the pylorus great care is taken to remove all the mucous membrane in the remaining portion of the pyloric antrum. My associates and I have considered that the objections to excluding the ulcer are more than compensated for by the safety which is attained. Although the results of this study show that there has been slightly higher incidence of stomal ulcers in those patients in whom the original duodenal ulcer has been excluded, we believe that this is not a just criticism of the procedure: the nature of the original ulcer has been different in the two series of cases, and the group in which the ulcer has been excluded probably represents persons who have a more active type of ulcer diathesis and who are therefore more prone to the development of a stomal ulcer. We had hoped to determine from this study the reasons for the unsatisfactory results following gastroenterostomy. In our series gastroenterostomies were frequent and were being performed in young patients. One would suspect that stomal ulcers would occur in a higher percentage in this group of young persons than in the older patients. Actually this was so, and yet there were some patients who were in their late fifties or early sixties at the time of the operation in whom stomal ulcers developed after gastroenterostomy had been performed. From the practical point of view, therefore, it would seem that the age and nature of the ulcer itself, rather than the age of the patient, was the important factor which should influence the surgeon in choosing the type of operative procedure to be performed. If there is evidence of an active ulcer, regardless of the age of the patient and regardless of whether obstruction is present, it would seem to be more satisfactory to perform a resection if other factors which influence operative risk have been considered. In our experience gastroenterostomy should be reserved for the older patients who have a chronic sclerosing stenotic lesion with definite mechanical obstruction.

THE CONSERVATIVE TREATMENT OF PREMATURE SEPARATION OF THE NORMALLY IMPLANTED PLACENTA

A Study of 293 Cases

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Premature separation of the placenta has been treated conservatively for the past twenty years by the Department of Obstetrics and Gynecology of Emory University at Grady Memorial Hospital. From October 1928 through September 1948 in 47,066 deliveries we diagnosed premature separation in 293 cases, an incidence of 1:161. The management of these cases has not been modified by the severity of the condition in the mother or by the viability of the fetus. For this reason it is felt that the results of our study should afford a good basis for the evaluation of the conservative plan of therapy.

The management of these patients was under the supervision of Dr. James R. McCord until he retired in 1945. The conservative treatment used by our department was outlined by Bartholomew in 1929.[1] This plan has been based on spontaneous vaginal delivery. Labor has been induced or stimulated by the artificial rupture of the membranes as soon as the diagnosis was established. Whole blood transfusions and other fluids have been administered as indicated for the individual case. Operative procedures were undertaken only for obstetric indications other than the premature separation of the placenta.

The diagnosis of premature separation was confirmed in these 293 patients by the examination of the placenta after delivery. The cases have been classified as mild, moderate or severe according to the following criteria: mild cases were those in which the signs of premature separation (hemorrhage, tetany of the uterus and fetal death) were not definite enough to permit the diagnosis before delivery; moderate cases were those in which two or more of the typical signs were present, and the diagnosis of premature separation of the placenta could be made antepartum; and severe cases were those in which the diagnosis of premature separation could be made antepartum and, in addition, eclampsia, severe hypertension (a blood pressure of 170 systolic and 110 diastolic or above) or definite shock was also present.

ANALYSIS OF CASES

Complete clinical information is available for 224 cases. The detailed study of the factors influencing the course of premature separation is based on this group. The entire series of 293 patients is used for the discussion of the maternal mortality.

The ages of these patients ranged from 13 to 44 years. Of the 224 patients, 99 were 13 to 24 years of age, 90 from 25 to 34 years and 35 older than 34 years. Forty-nine patients were nulliparas, and 175 were multiparas. Antepartum care was given 145 of the patients by our clinic, but 79 women were not followed

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1. Bartholomew, R. A.: Premature Separation of the Normally Implanted Placenta, Am. J. Obst. & Gynec. 18: 818, 1929.

by us in this pregnancy until the premature separation of the placenta occurred. The fetus was immature (weighing less than 1,500 Gm.) in 33 pregnancies, premature in 99 and at term in 92. Three patients had twin pregnancies.

Using the method of classification that we have outlined, 58 cases were designated as mild, 96 moderate and 70 severe. The severe cases were complicated by eclampsia in 7 patients, by severe hypertension in 49 and by shock in 33. Although the mild cases were not diagnosed until the placenta was inspected, most of them had antepartum observations suggestive of premature separation. Antepartum bleeding was present in 34 of the 58 mild cases, although the amount was slight in 25 of this number. Increased uterine tone was present in 7 other mild cases, and fetal death occurred antepartum in 6 additional cases. In only 11 of the 224 cases were there no clinical observations before delivery to indicate the possibility of premature separation.

Complicating Factors.—Hemorrhage, toxemia and shock are the serious conditions associated with predelivery. In 10 women shock developed at or after delivery. It occurred at delivery in 6 cases and within five hours in 3 others. Shock developed in one patient twelve hours postpartum. Three women relapsed back into shock after delivery. Twenty-five of the cases of shock developed in patients who had had hypertension, and 5 of these women lost less than 500 cc. of blood. The total blood loss was 1,000 cc. or more in 51 women, but shock was found in only 25 of this number. Thirty-eight of the 51 patients had been hypertensive, and shock developed in 20 of these.

Management of Labor.—Only 16 patients were not in labor, as indicated by the condition of the cervix, when they were admitted. The cervix was dilated 1 to 2 cm. in 38 women at their admission and 3 cm. or more in 74 patients. The degree of cervical dilatation was not determined in 96 patients.

The membranes were ruptured artificially to induce or to stimulate labor in 111 cases. The latent period and length of labor after the rupture of the membranes totaled less than five hours in 77 patients, from five

TABLE 1.—*Hemorrhage in Premature Separation of the Placenta*

Amount of Hemorrhage	Total Number of Cases	Stage of Gestation			Shock		Hypertension	Classification		
		Immature	Premature	Term	Before Delivery	At and After Delivery		Mild	Moderate	Severe
Before delivery										
None	37	3	16	16	1	..	23	19	6	10
Less than 500 cc.	152	26	69	57	9	..	81	29	70	27
500 cc. or over	35	4	12	19	14	..	21	9	12	23
At and after delivery (3 patients died undelivered)										
Less than 500 cc.	134	24	52	58	..	1	72	51	51	32
500 to 1,000 cc.	61	7	33	21	..	4	33	7	32	22
1,000 cc. or over	26	3	14	10	..	5	20	0	13	13
Total blood loss										
Less than 500 cc.	121	23	47	51	4	1	69	51	45	25
500 to 1,000 cc.	52	4	29	19	4	1	27	7	31	14
1,000 cc. or over	51	6	23	22	17	8	30	0	20	31
Total	224	33	99	92	25	10	125	58	96	70

mature separation. A total blood loss of 500 cc. or more has been considered a significant complicating factor. The amounts of blood lost have been determined by estimation and should not be considered as exact volumes. Table 1 gives the incidence and amounts of hemorrhage before delivery, at and after delivery, and the total blood loss. The relationship of hemorrhage to shock, to hypertension and to the severity of the case is indicated. Hemorrhage was not seen until the third stage of labor in 37 cases. The antepartum blood loss was less than 500 cc. in 152 cases, but it was 500 cc. or more in 35 others. The total blood loss before, during and after delivery was less than 500 cc. for 121 patients, yet 25 of these were among the 70 severe cases of premature separation.

Hypertension was found in 125 patients, of whom 7 were eclamptic. The large number of women without antepartum supervision and the incomplete postpartum records of many cases make it impossible to differentiate preeclampsia from essential hypertension. A sustained blood pressure of 170 systolic and 110 diastolic or above was considered severe hypertension. On this basis 49 patients had severe hypertension and 69 mild. Hypertension seemed to have little relationship to mild and moderate degrees of hemorrhage.

Shock was recognized in 33 patients. In 19 patients shock was present at the time of admission, and in 4 patients it developed after admission but before to twenty-four hours in 29 and over twenty-four hours in 5.

Low forceps were used in two deliveries; one breech extraction was done, and two podalic versions and breech extractions were performed (once for a prolapsed cord and once for a transverse presentation). A Porro cesarean section was performed on 3 patients. The indication for this in 1 instance was a leiomyoma obstructing delivery, and the premature separation was found at operation. The other two cesarean sections were performed in the early years of this study, the only indication being the premature separation of the placenta.

Fetal Mortality.—Fetal loss is summarized in table 2. Data on the 33 infants weighing less than 1,500 Gm. are not reviewed. The infant mortality of the 191 premature and term deliveries was 60.2 per cent. The fetal mortality of the severe cases of premature separation was 82.8 per cent, of the moderate cases 55.2 per cent and of the mild cases 27.7 per cent.

Maternal Mortality.—Data on the entire group of 293 patients are used for our study of maternal mortality. Fourteen mothers died, giving an uncorrected maternal mortality rate of 4.8 per cent. Two of the patients died before the infants had become viable, 1 at the twenty-third week of gestation (case 287) and 1 at the twenty-sixth week (case 290). For this reason all cases of premature separation of the placenta

occurring in the last half of pregnancy are included in our review. The major factors involved in the maternal deaths are summarized in table 3.

We consider 5 fatalities as correctible in that the conservative method of treatment was not the causative factor. These 5 cases are summarized as follows:

CASE 280 (1929).—The patient had eclampsia, and labor was induced in the home by a local physician. He used an unsterile intrauterine catheter for the induction. Pelvic peritonitis and parametritis developed, and the patient died of bilateral pyonephrosis seven weeks postpartum.

CASE 281 (1932).—The patient contracted lobar pneumonia twelve days postpartum while waiting for sterilization. She died two days later.

CASE 287 (1948).—*Shock and Anuria.*—The patient was admitted in shock, with anuria, and was delivered one hour later. Profuse hemorrhage occurred before and at delivery. Adequate blood replacement (5,000 cc.) was given, but the anuria persisted.

CASE 288 (1937).—*Sepsis.*—The condition of the patient was not diagnosed as premature separation until the placenta was examined. Intrapartum infection had occurred in a twenty-five hour labor with an eleven hour second stage. Death was caused by sepsis on the eighth postpartum day.

CASE 289 (1947).—*Severe Hypertension.*—The blood pressure of the patient was 220 systolic and 160 diastolic. Shock had not occurred, but acute pulmonary edema developed five hours postpartum, and the patient died one hour later.

TABLE 2.—*Fetal Results: 191 Infants in 188 Pregnancies (Including Three Pairs of Twins)*

Condition of Fetus	Total	Maternal Factors: Hemorrhage: Less than 500 Cc.	Maternal Factors: Hemorrhage: 500 Cc. and Over	Maternal Factors: Shock	Maternal Factors: Hypertension	Maternal Factors: Classification: Mild	Maternal Factors: Classification: Moderate	Maternal Factors: Classification: Severe
Premature								
Dead on admission	54	18	36	9	38	3	24	27
Died after admission	10	4	6	0	8	3	6	1
Born alive	35	32	3	3	13	14	14	7
Total	99	54	45	12	59	20	44	35
Term								
Dead on admission	40	16	24	12	21	3	19	18
Died after admission	11	7	4	2	5	4	4	3
Born alive	41	33	8	1	19	20	18	3
Total	92	56	36	15	47	27	41	24

TABLE 3.—*Maternal Deaths*

Case	Classification: Mild	Classification: Moderate	Classification: Severe	Severe Hypertension *	Shock	Amount Blood Loss (Cc.)	Time of Death †	Autopsy
280	....	....	Yes	Ecl.	No	500	7 wk. P. P.	Yes
281	....	....	Yes	220/130	No	300	14 days P. P.	No
282	....	....	Yes	.....	On admission	2,000	1 hr. after admission	Yes
283	....	....	Yes	.....	On admission	2,000	7 hr. after admission	Yes
284	....	....	Yes	.....	On admission	2,000	4 hr. after admission	Yes
285	....	....	Yes	Ecl.	At delivery	600	6 hr. P. P.	Yes
286	....	....	Yes	Ecl.	On admission	1,200	11 hr. P. P.	Yes
287	....	....	Yes	200/120	On admission	2,200	3 days P. P.	No
288	Yes	....	....	No	No	500	8 days P. P.	No
289	....	....	Yes	220/160	No	500	6 hr. P. P.	Yes
290	....	Yes	....	No	No	Slight	6 days P. P.	Yes
291	....	....	Yes	No	In labor	1,400	3 days P. P.	Yes
292	....	....	Yes	170/120	4 hr. P. P.	1,400	22 hr. P. P.	No
293	....	....	Yes	170/110	At delivery	1,700	7 hr. P. P.	Yes

* Ecl. denotes eclampsia. † P. P. denotes postpartum.

CASE 282 (1943).—The patient was admitted four hours after the delivery of the first twin. Severe hemorrhage had occurred in the home, and the patient was in profound shock at the time of admission. She did not respond to therapy for shock and died one hour later, with the second twin undelivered.

CASES 283 (1937) and 284 (1942).—The condition of these patients was not diagnosed as premature separation of the placenta until their postmortem examination. Because of poor clinical judgment, treatment was not given until less than thirty minutes before death. The blood loss of these 2 patients was not recognized as having been so severe (2,000 cc. each) until the cases were reviewed after they had died.

Serious complications were present at the admission, on diagnosis of condition, of 5 other patients who died.

CASES 285 (1934) and 286 (1934).—*Eclampsia.*—The patients were in coma at the time of admission and remained comatose. Both patients manifested shock during delivery and failed to respond to treatment.

The postpartum course of 2 additional patients was complicated by conditions terminating in death.

CASE 290 (1945).—The patient had a total blood loss of less than 500 cc., and shock did not occur. Pulmonary edema developed forty-eight hours postpartum and progressed in spite of treatment until the patient's death six days after delivery.

CASE 291 (1937).—The patient manifested shock at the time of delivery. The total blood loss was 1,400 cc. Sepsis developed postpartum, ending in coma and death.

No specific complications in addition to the premature separation were found to account for 2 of the deaths.

CASES 292 (1934) and 293 (1941).—The patients had severe hypertension and profuse hemorrhage before and at delivery. The bleeding persisted after delivery in case 293. Both patients manifested shock postpartum and died.

COMMENT

The premature and term fetal mortality of this review was 60.2 per cent. Ninety-seven infants were living when the mothers were admitted and 76 of these, or 78.4 per cent, were delivered alive. Fourteen infants of the mothers classified as severe cases of premature separation were living at admission, and 10 were delivered alive. Only 4 babies were born alive of the 33 patients who manifested shock.

An impressive feature of the conservative treatment of premature separation of the placenta is the rapidity with which delivery is completed after the onset of symptoms. Only 16 patients were found to have no dilatation of the cervix at the time of their admission. Fourteen of these 16 pregnancies were more than four weeks from term, and 11 of the cases were classified as of severe premature separation. The results obtained with these women should give an evaluation of the conservative method of treatment under extremely difficult circumstances. These cases are summarized in table 4. Delivery occurred within less than seven hours after rupture of the membranes in 9 cases and within eighteen hours in all but 2 of these 16 patients. The 1 maternal death, case 280, is described in the preceding section on maternal mortality.

Hypertension, hemorrhage and shock are the major complications associated with premature separation of the placenta. Excessive loss of blood in hypertensive patients is dangerous. Of the 38 hypertensive patients who lost 1,000 cc. or more of blood, shock developed in 50 per cent and death occurred in 10 per cent.

Table 4.—*Patients Not in Labor on Admission*

Classification	Total	Nullipara	Stage of Gestation: Immature	Premature	Term	Latent Period and Length of Labor: 0 to 6 Hours	7 to 18 Hours	Over 18 Hours	Infant Results: Dead on Admission	Died After Admission	Born Alive
Mild	2	1	0	2	0	1	1	0	0	1	1
Moderate	3	0	0	3	0	1	1	1	2	1	0
Severe	11	3	3	6	2	8	2	1	9	1	1

Fresh hemorrhage at the time of delivery was infrequent in this series. The amount of loss of blood at delivery was often described as excessive, but it was composed almost entirely of old blood clots. Shock developed after delivery in only 4 cases, and persistent postpartum bleeding occurred in only 2 patients. In one of these the bleeding was controlled by a uterine pack; the other case has been summarized in the preceding section among the maternal mortalities (case 293).

The uterus was inspected visually in our study in only 13 cases (3 cesarean sections and 10 autopsies). A proved case of uteroplacental apoplexy (Couvelaire uterus) has not been seen on our service in the last thirty years. The hemorrhagic infiltration of the myometrium that may have occurred among our patients has not been severe enough to impair uterine contractility or to permit persistent postpartum bleeding.

The incidence of shock as diagnosed in this review was relatively low, although significant hemorrhage (500 cc. or over) occurred in 103 cases. Shock seemed to occur frequently among hypertensive patients who lost considerable blood. The predisposition of these hypertensive patients to manifest shock indicates that blood pressure readings alone cannot be relied on to determine shock in cases of premature separation of the placenta. So-called normal blood pressure readings may be severe shock levels for previously hypertensive patients. Among the 33 patients who had clinical shock (as indicated by pulse, temperature and circulatory collapse) 9 had blood pressures of 100 systolic and 70 diastolic or above at the time of shock. After treatment for shock these pressures rose to 150 systolic and 100 diastolic or higher.

Nine of the patients who died had had shock, and 5 of these died in shock. The condition of 2 of the 5 women had not been diagnosed as premature separation (cases 283 and 284); 2 other women had an associated eclampsia. The fifth woman (case 293) had persistent postpartum bleeding and died seven hours after delivery. Severe hypertension had occurred in 8 women who died, and 3 of these had eclampsia. Only 2 maternal deaths (cases 288 and 290) were not preceded by severe hypertension or shock, or both.

The maternal mortalities have been evaluated concerning the extent to which the deaths should be attributed to the conservative treatment of premature separation of the placenta. Five deaths were caused by conditions not related to this plan of therapy. Five other women had serious conditions present at the time of their admission or before the diagnosis of their condition. These complications were eclampsia, profound shock and anuria, sepsis and extremely severe hypertension. Such conditions would jeopardize the success of any program of therapy. In the deaths of 4 patients the conservative plan of treatment may have been a significant factor. Pulmonary edema and postpartum sepsis were the immediate causes of death in 2 women, and the other 2 had severe hypertension and profuse hemorrhage.

SUMMARY

From October 1928 through September 1948, 293 cases of premature separation of the placenta have been diagnosed.

The treatment in these cases has been conservative, consisting of spontaneous vaginal delivery. Artificial rupture of the membranes to induce or stimulate labor and supportive measures of transfusions and intravenous fluids have been used.

The uncorrected maternal mortality rate was 4.8 per cent, or 14 deaths. Five of these deaths were not the result of the conservative method of treatment. Five more occurred in patients who had serious complications at the time of admission or before the diagnosis was established. The conservative treatment may have been a significant factor in 4 deaths, giving a corrected mortality rate of 1.4 per cent.

A detailed review has been made of the 224 pregnancies on which complete information is available. These are classified as 58 mild, 96 moderate and 70 severe cases of premature separation of the placenta.

Hemorrhage totaling 1,000 cc. of blood or more occurred in 51 patients. Loss of blood at the time of delivery was composed almost entirely of old blood clots. Persistent postpartum bleeding took place after only 2

deliveries. No proved case of uteroplacental apoplexy (Couvelaire uterus) was seen in this study.

Shock was diagnosed in 33 patients. It was associated with either hypertension or excessive blood loss, and 20 of the patients had both conditions.

Hypertension was present in 125 patients. It was classified as mild in 69 cases and severe in 49. Eclampsia occurred in 7 women, 3 of whom died.

Ninety-seven premature and term infants were living at the time the mothers were admitted, and 76 of the babies were delivered alive. Fourteen infants were living at the admission of the 70 patients whose condition was classified as severe, and 10 of these were born alive.

ABSTRACT OF DISCUSSION

DR. M. PIERCE RUCKER, Richmond, Va.: Drs. McCain and Poliakoff have given a good clinical description of premature separation of the placenta and have stressed the importance of hemorrhage, shock and hypertension in its prognosis. Its etiologic basis is still unknown. Of the 224 cases discussed, in 145 with full clinical data the mothers had antepartum care. The authors do not say whether such care had any influence on the incidence or on the severity of the disease. I was particularly impressed with what was said about uteroplacental apoplexy (Couvelaire uterus). There was no proved case of this in the present series, and 13 uteri, presumably the worst cases, came under observation either at operation or at autopsy. In the 293 cases, there were only 2 instances of uncontrollable bleeding, and neither showed uteroplacental apoplexy. My own experience, though less extensive, is similar. One often hears the argument that a uterus so broken down by intramuscular hemorrhage cannot contract and should be removed to prevent uncontrollable postpartum hemorrhage. From the large series compiled by the authors and from my own smaller series, one must conclude that the Couvelaire uterus is either extremely rare or else it can contract sufficiently to prevent serious postpartum hemorrhage, to say nothing of completing the first and second stages of labor. The authors' classification is to be commended, and I like the expression recognized cases. Only their treatment of patients with the severe type is open to any criticism. No one would advocate cesarean section for those with the mild or the moderate types, although 2 of the maternal deaths occurred in these two groups. One case was not recognized until the placenta was inspected; the patient died of pulmonary edema six days postpartum. Being an advocate of digitalis therapy in all types of toxemia, I would like to know whether this patient was given digitalis and, if so, how soon and how much. The case of death at seven weeks postpartum of sepsis caused by an unsterile uterine catheter that was used before the authors saw the patient cannot be charged to their treatment, nor can the case in which pneumonia developed on the twelfth day. The patient who died one hour after admission in shock and with an undelivered second twin presented a hopeless situation regardless of what type of treatment one advocated. The 2 patients who were not recognized as having ablatio placentae were admitted in shock. Evidently they did not respond to antishock treatment and were poor subjects for cesarean section. Cesarean sections surely should not have been performed on the 2 women with eclampsia. My only criticism would be that possibly these patients were not treated conservatively enough.

DR. C. O. MCCORMICK, Indianapolis: Undoubtedly it is startling to most physicians, who still harbor the opinion that forcible delivery holds an obvious position in the treatment of abruptio placentae, to hear it proclaimed that, regardless of the severity of the mother's condition or the viability of the fetus, and barring other obstetric indications, all cases can be managed best by conservative measures. Despite criticism of radical procedures that has appeared from time to time in outstanding reports, particularly those of Irving and Polak, and now substantiated by the study of Drs. McCain and Poliakoff, most physicians have been slow to adopt this doctrine of conservatism, particularly when handling cases of the severe type. I should like to place my approval on the classification of premature separation of the placenta employed by Drs. McCain and Poliakoff. Certainly a classification should be all-comprehensive and should include all cases not diagnosed until placental inspection after delivery. This increases the recorded incidence, which on this basis has been found to range from 1:150 to 1:200, that of the authors being 1:161. Naturally, uncontrolled abortions arising from this condition further increase the incidence. Hemorrhage, shock and hypertension, the familiar triad, were found to be the chief associated factors in the severe cases. In some instances shock occurred to a degree out of proportion to the loss of blood. An additional factor in such cases might be the sudden distention of the uterus. It was correctly pointed out that blood pressure readings alone are not dependable when studying shock in cases of abruptio placentae complicated by hypertension. With this in mind, that error should be avoided. Sixteen patients were not in labor when admitted or presumably when the diagnosis of abruptio placentae was made. One may infer that labor was induced in all these cases by rupturing the membranes. I wonder if a cervical pack or bag was used in any of them. The bag, because of its uncertainty and the time element, should have no place in the handling of severe cases. Perhaps the only indication for its use is in borderline instances, in which the differentiation between marginal placenta and abruptio placentae is not readily made. Also, I would like to know if the Spanish windlass was at all employed. It was noted that rapidity of labor was characteristic of this group of cases. Offhand one might think that nature, having suddenly realized her error, promptly attempts to save face. Unfortunately, in this instance she too frequently fails miserably. The authors report no proved case of uteroplacental apoplexy in their series. However, one might reasonably suspect that such a condition may have existed in the 2 cases of persistent postpartum bleeding, one of which was fatal, and also in the case of delayed postpartum shock. One cannot recognize a Couvelaire uterus except by direct inspection either at section or autopsy. Otherwise, there are no characteristic physical signs by which it may be identified.

DR. EDWARD G. WATERS, Jersey City, N. J.: Deaths from placental abruption must be considered preventable. Although complicating factors, notably toxemia and eclampsia, may induce a fatal issue, the major determinants of death from premature separation of the placenta are loss of blood and shock. For combating these, physicians have successful measures which must be at hand in every hospital. There is little dispute regarding the need for emptying the uterus to correct progressive and symptom-producing pathologic conditions. There is no real argument on the premise that the majority of cases are best managed by vaginal delivery, and although there is concern, there is no great dismay in viewing the prospects for the patient with an uncomplicated abruption, even though severe. It is when severe toxemia or eclampsia complicates the picture, especially before the thirty-fifth week of pregnancy, that the greatest danger is present for the mother, because medical science still has no specific therapy, no ready means of control, no gage by which one can accurately predict the degree or the outcome of increasing toxemia. Therefore, when the picture of abruption is complicated by fulminating toxemia the choice of therapy must be influenced, with the latter condition outranking in importance the more controllable ones of shock and loss of blood. It is with this in mind that I disagree with Drs. McCain and Poliakoff on the matter of selection of therapy. I also question the need or worth of correcting out any deaths in evaluating results. Any large series in any institution would undoubtedly contain a proportionate number of deaths not closely related to the plan of treatment and dependent on complicating factors or accidents, so that statistically correcting patients back to life seems rather unprofitable. The attitude of my associates and me toward the actual means of effecting delivery in patients with abruption is more at variance with the authors than is our actual experience. The absence of Couvelaire uterus, or uteroplacental apoplexy, in Drs. McCain and Poliakoff's report

is interesting. However, the diagnosis is dependent on study of the myometrium, and/or gross inspection of the uterus at operation or autopsy. We have seen a large number of these uteri because we apply cesarean section in nearly 1 of 6 patients with abruption. We also know that the old belief that such uteri should or must be removed is totally untrue. Extensive hemorrhage and necrosis of the myometrium does not of necessity prevent uterine retraction and cessation of bleeding, for these can be directly observed at operation. Some of the worst cases have variable degrees of subserosal hemorrhages without extensive myopathologic conditions. The authors are to be commended for stressing that caution must be exercised in the interpretations of blood pressure readings when recent records are not available for comparison. Such caution is most important when operative treatment is being considered.

DR. J. P. GREENHILL, Chicago: I wonder whether you noticed the complete absence of the word trauma. Years ago we spoke about trauma, physical trauma, as one of the causes of abruptio placentae, yet neither the speakers nor the discussants have mentioned it. I agree that trauma is only a rare cause. I was amazed, and perhaps I misunderstood the statement, that only two forceps operations and one breech extraction were performed. I presumed there were more breech cases than 1 in this entire series, but I may have misunderstood the figures. I agree with the discussants about the presence or absence of Couvelaire uterus, that it was not seen because of the absence of cesarean section. I fully agree with Dr. Waters that Couvelaire uteri do not often have to be removed and that most of them will contract spontaneously. However, there are many uteri which must be removed in spite of the fact that there is no abruptio placentae. Our secretary, Dr. Hunt, wrote an excellent paper on the occasional removal of uteri for postpartum hemorrhages, even when there was little or no obvious pathologic condition. There is a definite place for cesarean section in the treatment of premature separation of the placenta, especially in patients who have aggravating toxemias that do not respond to conservative therapy. At present the cesarean section is a fairly innocuous operative measure, and with frequent resort to blood transfusion and antibiotics it is certainly a safe operation. Although I fully agree that in most cases of abruptio placentae conservative procedures should be followed, there is a definite percentage of cases in which treatment, and in my opinion conservative treatment, should be by cesarean section.

DR. JOHN R. MCCAIN, Atlanta, Ga.: In answer to Dr. Rucker's question about the 2 patients who had pulmonary edema, both of these patients were put on digitalis therapy as soon as the pulmonary edema developed. Concerning Dr. McCormick's question regarding the manner of induction of labor used for the patients without any cervical dilatation, this was done by means of rupture of the membranes. No cervical pack or bag was used in these 16 cases. In regard to the Spanish windlass, I do not have the exact figures, but this type of abdominal binder was used in 15 to 20 of the cases. It is my impression that the discomfort from these binders outweighs their value. I do not want our paper to be misunderstood with reference to the incidence of uteroplacental apoplexy. Dr. Poliakoff and I do not wish to imply that this condition did not occur among the cases of our series. The point that we wish to stress is that uteroplacental apoplexy must be of relatively little clinical significance. The amount of hemorrhage that probably did occur into the myometrium of our patients was not sufficient to interfere with the contractility of the uterus or to permit persistent postpartum bleeding. In reply to Dr. Greenhill's questions, trauma did not appear as an etiologic factor in our series. Only two low forceps deliveries were performed in the 224 cases. In 2 cases delivery was by version and breech extraction. Only 1 additional breech extraction was performed, although other breech deliveries occurred. The primary purpose of this study has been to determine as accurately as possible the results that can be expected if premature separation of the placenta is treated conservatively. These results should then speak for themselves.

LOCALIZING CEREBELLAR SYNDROMES

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In 1917 Gordon Holmes[1] published his classic dissertation on cerebellar symptomatology. Despite this work, the localization of cerebellar lesions has continued to be difficult. In recent years greater understanding of the cerebellum has become available through studies of cerebellar morphology and physiology.[2] These advances have made it possible to recognize localizing syndromes which are of pure cerebellar origin and additional symptom complexes which result from combined involvement of the cerebellum and adjacent structures.[3] As a preliminary step to the understanding of these syndromes, it is important to review briefly the recent advances in the clinical aspects of cerebellar anatomy.

No attempt will be made to go into the finer details of cerebellar anatomy, physiology, histology and comparative morphology. Generalizations made for clinical purposes leave inaccuracies as to finer details but are valuable when dealing with patients.

CEREBELLAR ANATOMY

The Purkinje cells of the cerebellum are arranged in a row and have brushlike dendrites in the molecular layer. Incoming impulses reach the dendrites and cell bodies of numerous Purkinje cells. This cellular arrangement favors the production of summation, reinforcement and prolonged discharge. It suggests the important role of the cerebellum in controlling postural reflexes and tone.

The cerebellum first appears in the cyclostomes and sharks. In these animals the caudal portion is connected with the vestibular system for the maintenance of equilibrium in space. The cephalad portion receives spinocerebellar fibers to control the synergies of swimming. In land animals, the vestibular complex continues to subserve equilibration and the anterior lobe controls the synergies for walking. In higher animals an intermediate portion, the posterior lobe, develops connections wtih the cerebral cortex and controls the synergies of skilled voluntary movements of the extremities.

In man it is likewise possible to divide the cerebellum into three major functional divisions, as shown in the accompanying illustration: (1) the vestibular complex, equilibratory in function, located posteroinferiorly near the midline and forming the roof of the fourth ventricle; (2) the anterior lobe, controlling postural reflexes and the synergies of walking, located antrosuperiorly, and (3) the posterior lobes (right and left), expanding postrolaterally but continuous in the midline (cerebellar hemispheres) and coordinating ipsilateral skilled voluntary movements.

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The vestibular complex receives its afferent supply from the vestibular system and sends fibers to the brain stem and spinal cord. The anterior lobe receives spinocerebellar afferents and sends fibers to the spinal cord via the red nucleus and rubrospinal tracts. The posterior lobes receive fibers from the opposite frontal and temporal cortex via the pons varolii and from the opposite inferior olive. The efferents from the dentate nucleus return to the contralateral cortex via the red nucleus and ventrolateral thalamic nucleus.

LOCALIZING CEREBELLAR SYNDROMES

During the past two years, a total of 48 cases of important cerebellar dysfunction have been studied on the neurology section at the Veterans Administration Hospital. These cases have been classified as to etiologic basis and as to the localization indicated. Cases are cited to illustrate the various syndromes.

1. *Syndrome of the Posterior Lobe (Neocerebellum).*—In the syndrome of the posterior lobe there is a disturbance of skilled voluntary movements while gait and static equilibrium are relatively intact. Postural fixation of the extremities is defective, and errors in rate, range, direction and force of voluntary movements occur. On examination, the ipsilateral arm may display hypotonia. When outstretched, it tends to drift downward and laterally. A similar drift is seen in the past pointing test. Coordination tests such as finger-nose and heel-knee tests show errors in rate, range, direction and force. The movements are slow and jerky, deviate from a direct line, are irregular in force and tend to overreach or underreach the mark. If the dentate nucleus is involved, movement tremor is added to the foregoing abnormalities. When the patient walks, the ipsilateral arm generally fails to swing with the associated automatic movements and the patient tends to deviate toward the side of the lesion. A specific type of nystagmus may be seen in acute or progressive lesions. Characteristically, there is coarse nystagmus on looking toward the lesion and a fine nystagmus on looking away from the lesion. The head may be rotated either toward or away from the lesion. On the affected side the tendon reflexes tend to be hypoactive and the knee jerks pendular. This syndrome is commonly seen in laterally placed tumors such as astrocytomas, in cerebellar abscess, in multiple sclerosis and in penetrating gunshot wounds. It is occasionally observed in cerebellar encephalitis. In our series of 49 cases of cerebellar ataxia there were 4 examples of this syndrome. The etiologic basis was different in each case, the syndrome being due to trauma, virus encephalitis, multiple sclerosis and astrocytoma. Differential diagnosis included lesions of the contralateral frontal (premotor) lobe or contralateral parietal lobe.

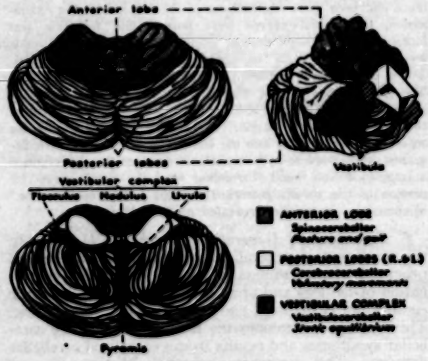

Fig. 1.—Anatomic and functional division of the cerebellum.

CASE 1.—E. B., a housewife aged 24, was admitted June 24, 1947 with a history of severe head injury incurred in an automobile accident one year previously. She had sustained multiple fractures, prolonged coma and decerebrate rigidity. Neurologic examination on admission revealed severe incoordination of the right arm and leg with intention tremor. There was paresis of the right lower part of the face and right side of the tongue. Moderate dysarthria was present. The patient was capable of 64 per cent of required self care and 32 per cent of required ambulation activities. She received rehabilitation therapy and was discharged Sept. 8, 1947 capable of 100 per cent self care and 90 per cent ambulation.

2. *Syndrome of the Cerebellopontine Angle.*—The syndrome of the cerebellopontine angle is a variant of the one described in the foregoing section. The cerebellar signs early are probably due to interference with the brachium pontis and later due to pressure on one posterior lobe and dentate nucleus. The associated observations result from pressure on neighboring structures. There is varying involvement of the eighth, seventh, sixth, fifth, ninth and tenth cranial nerves as well as brain stem structures. The cerebellar signs, including nystagmus, are those described in the preceding syndrome. Tinnitus, deafness and loss of labyrinthine function are common. Diminished corneal reflex and hypesthesia of the face appear next. About this time there is usually some facial paresis followed by paresis of the external rectus muscle of the eye. Difficulty in swallowing, hoarseness, hiccups, vomiting and headache are late occurrences. Tumor in this area is the commonest cause for this syndrome.

In our series there were 3 acoustic neuromas, 2 dermoid cysts, 1 meningioma and 1 angioma.

CASE 2.—K. K., a man aged 29, was admitted Oct. 1, 1948 with a history of headaches, visual difficulty and progressive deafness. He dated the onset to a boxing accident in 1945. He recently noticed incoordinate movements of his right arm and a tendency to staggering gait. Positive neurologic observations were hypesthesia of the right side of the face, absent right corneal reflex, slight weakness of the right side of the face and deafness on the right. There was moderate incoordination and intention tremor of the right arm and leg. The patient deviated to the right on walking. Roentgenograms of the skull revealed normal conditions. At operative intervention an extremely large cystic right acoustic neuroma was subtotally resected. Postoperatively, there was gradual improvement in the cerebellar signs of the patient.

3. *Syndrome of the Superior Cerebellar Artery.*—The syndrome of the superior cerebellar artery is another variant of disturbed skilled voluntary movements. In this uncommon syndrome there is a lesion, usually vascular thrombosis, of the spinothalamic tract in the midbrain and superior cerebellar peduncle. There is ipsilateral incoordination of skilled voluntary movements with loss of pain and temperature of the opposite half of the face and body. The onset is generally sud-

den, and there is gradual improvement. One example of this was seen in this series.

4. *Syndrome of the Posterior Inferior Cerebellar Artery.*—The syndrome of the posterior inferior cerebellar artery appeared in 15, approximately one third, of the cases of cerebellar ataxias. The symptoms result from involvement of the medulla, inferior cerebellar peduncle and cerebellum. There is decided ipsilateral hypotonia, asthenia and incoordination of voluntary movements without intention tremor. In addition there is pronounced disturbance of gait with staggering to either side. The characteristic signs of medullary involvement include ipsilateral loss of corneal reflex and pain and temperature sensation to the face associated with contralateral pain and temperature loss of the body. Cranial nerve signs include vertigo, nystagmus, Horner's syndrome, difficulty in swallowing and hoarseness. The cause is usually thrombosis, and the prognosis is good for satisfactory functional recovery.

Case 3.—V. B., a garage worker aged 32, was admitted Jan. 31, 1949 with onset that morning of dizziness and headache. The gait was staggering, and the right extremities were clumsy. Examination revealed pronounced nystagmus on horizontal gaze. There was absent right corneal reflex and loss of pain and temperature sensation on the right side of the face. There was paresis of the seventh and tenth nerves on the right. Pain and temperature sense was lost on the left half of the body. There was decided incoordination of the right arm and leg. The patient had persistent hiccup and vomiting. He gradually improved over a period of two weeks. He was placed on rehabilitation service and discharged April 27, 1949 capable of all self-care and ambulation activities.

5. *Bilateral Posterior Lobe Syndrome.*—The syndrome of the bilateral posterior lobe consists of bilaterally disturbed skilled voluntary movements similar to those in the first syndrome described. Because of bilateral involvement, the gait is more severely involved and dysarthria tends to be severe. Multiple sclerosis, chronic encephalitis, tumor and dentate cerebellar atrophy may produce this syndrome, which occurred 4 times in the present series.

Case 4.—A. A., a man aged 69, first noticed trembling of his hands in 1898 after an attack of typhoid. This gradually progressed until 1938, when he was no longer able to work. Neurologic examination revealed hypotonia with increased "floppiness" on passive movement. Postural fixation of the proximal joints was diminished. There was definite incoordination and intention tremor of the arms and legs. The patient walked well, but staggering was noticed at the turns.

6. *Syndrome of the Vestibular Complex.*—The pure cerebellar syndrome of the vestibular complex is characterized by loss of static equilibrium and is most commonly seen in tumors (medulloblastoma) of the posterior aspect of the vermis cerebelli in children. It resulted from multiple sclerosis in one patient and from trauma in another. Tests for skilled voluntary movements of the extremities are normal when the patient is supine or when the trunk is supported. Attempts of the patient to maintain a sitting or standing posture result in falling in any direction. The head bobbles and oscillates on the trunk, while the trunk undergoes a similar titubation on the extremities. When walking is possible, it is reeling and drunken. There is usually nystagmus, present in all positions of the eyes.

Case 5.—R. K., a man aged 27, was admitted Aug. 15, 1946 with a history of diplopia and staggering gait. Neurologic signs included bilateral pathologic great toe reflexes, absent abdominal reflexes, dissociated ocular movements and nystagmus in all positions of the eyes. Voluntary movements of the extremities were performed normally. On sitting or standing, there was violent bobbing of the head and trunk. The patient would fall immediately unless supported. A diagnosis of multiple sclerosis was made.

7. *Syndrome of the Anterior Lobe.*—The syndrome of the anterior lobe consists of disturbed postural reflexes and walking synergies. To make such a localization, one must ascertain that static equilibrium and voluntary movements are intact. These patients walk with a wide base and stagger or deviate to both sides. The gait tends to be stiff-legged due to exaggerated positive supporting reaction. On occasion it is possible to demonstrate an extensor thrust reflex. If flat pressure is placed against the sole to spread the toes, the leg gives a reflex extensor thrust against the hand. This syndrome was seen in 1 case of degenerative cerebellar disease and in 1 cerebellar tumor in this series.

Case 6.—W. M., a man aged 34, was admitted Aug. 12, 1948 with a history of headaches for the past year. About the same time he noted onset of unsteady gait. For the past two months there had been some unsteadiness of the left hand. On examination, the cranial nerves were normal and sensation was intact. Reflexes were normal except for an absent left ankle jerk, the residuals of an old herniated intervertebral disk. There was slight impairment of coordination of the left arm. The gait was on a wide base and appeared stiff-legged; the patient staggered to both sides. There was a positive extensor thrust reflex. The diagnosis was cerebellar tumor of the anterior lobe extending into the left posterior lobe. Ventriculograms showed severe hydrocephalus. At operative intervention a large cyst was found "extending from the anterior superior portion of the vermis posteriorly to the left cerebellar lobe." Microscopic examination revealed an angioblastoma.

8. *Syndrome of Generalized Cerebellar Deficit.*—In the syndrome of generalized cerebellar deficit there is progressive unsteadiness of gait. Later the coordination of the legs and arms is impaired. Finally, static equilibrium is involved and speech becomes dysarthric. This syndrome combines the features of the pure cerebellar syndromes and results from generalized cerebellar damage. This syndrome occurred 18 times in our series, comprising slightly more than one third of the cases. The chief problem of differential diagnosis is with the spinal ataxias. Retraining technics were applied with good results.

Case 7.—H. L., a man aged 58, was admitted Oct. 7, 1945. He noticed the onset of difficulty in walking and stiffness of his legs in 1940. This gradually progressed to incoordination of the arms and dysarthric speech in 1943. He gave the history of his mother's having a similar disorder. When the case was reevaluated in 1946, the cranial nerves were normal except for dysarthria. Reflexes, sensation and motor power were normal. There was decided incoordination of the extremities. The patient was able to stand only with support and had been unable to walk for two and one-half years. The patient was placed on a retraining program of exercises in July 1946. In April 1948, at the time of his discharge from the hospital, he was capable of all necessary self care and ambulation activities. He was able to walk with two canes and to board street cars; he had developed skills in weaving, carpentry and gardening.

CONCLUSION

Based on present concepts of cerebellar anatomy, there are five recognizable pure cerebellar syndromes. These have been described as the posterior lobe, vestibular complex, anterior lobe, generalized deficit and bilateral posterior lobe syndromes. In addition,

there are three variant localizing syndromes which result from associated implication of cranial nerves and brain stem structures. Illustrative cases are cited, prognosis is indicated, and the results of therapy are suggested.

ABSTRACT OF DISCUSSION

DR. BENJAMIN H. BALSER, New York: Dr. Brown is obviously well versed in cerebellar anatomy, physiology, pathology and clinical pathology. He delineated clinical syndromes which he correlates with disease of specific areas of the cerebellum and brain stem. The documentation of the case material in the paper is poor. The delineation of the syndromes is clear, and they were clearly presented; but the case material includes 48 cases, of which only 8 (7 cerebellar pontine angle tumors with operative treatment and 1 tumor of the cerebellar substance) had apparently been exposed or investigated. There were no remarks or evidence of any postmortem examinations in any of the other cases. The case material included generalized head trauma, encephalitis, disseminated sclerosis and tumors, all of which were rather widespread in effect, and it would take rather close correlation with the actual clinical material, either at operation or postmortem examination, to substantiate the syndromes as they were outlined. Except in progressive degenerative diseases, Dr. Brown points out what I believe is a most important fact: namely, the recovery of these patients with directed exercises and prolonged care. I believe that this is particularly important and that it has not received adequate emphasis previously. One experience which has always given me a great respect for the ability of the brain to take up the function of parts that have been removed was in regard to a man who was operated on by Harvey Cushing in 1924 for an astrocytoma. At that time the anterior and posterior lobes of the cerebellum were removed on the left side. In 1936 this patient was admitted to Montefiore Hospital in New York with recurrent signs on the right side, and at that time the right anterior and posterior cerebellar lobes were removed, so that practically all that was left was his vermis. Within six months that patient was able to leave the hospital, and at my last check-up in 1940 the man was perfectly all right, to all intents and purposes. He had a job and was able to support his family, and he had no cerebellar signs that one could detect on clinical examination.

DR. AVERILL STOWELL, Tulsa, Okla.: It has been shown in animals, especially in cats and in some cases in monkeys, that it is possible to remove large portions of the cerebellum and have those animals show few clinical symptoms five or six months later. It has been shown in stimulating the cerebellum that if one stimulates the paramedian lobe of the cat, or the tonsil in man, one often will produce a movement of the opposite upper or lower extremity. In other words, if one stimulates the tonsil on the right, one may produce a movement on the left. That is likewise true, as Snider and others have shown, in relation to the sensory portions of the cerebellum, where sensations are bilaterally represented both in the anterior lobe and in the paramedian area. As time goes on, there may be a change in conceptions of the unilaterality of the cerebellum, and it may be brought out that in the cerebellum all modalities of sensation are represented. In other words, optic, auditory and tactile areas can be mapped. Clinically, there are not yet any tests for the recognition of cerebellar sensation, and the only case that my associates and I have been able to find was a case that was confused with parietal tumor. The man came in with all the signs and symptoms of a brain tumor with increased intracranial pressure and papilledema, and on detailed sensory testing we found that there was a slight loss in recognition of weight in the right upper extremity. We thought that the patient probably had a parietal tumor. There were no other signs, and as a result we employed ventriculography. We performed a suboccipital craniotomy and found a cystic astrocytoma in the right cerebellar hemisphere. I think that over a period of time more sensory functions of the cerebellum will be recognized and more abnormalities detected. At present there is no clinical test for the determination of abnormalities in so-called cerebellar modalities of sensation.

DR. ROLAND P. MACKAY, Chicago: Dr. Brown's presentation seems to confirm a generalization which I have formulated for my own purposes. Generalizations, though dangerous, are sometimes helpful in understanding a mass of detailed information. My generalization is this: the paleocerebellum has as its function the relating of the total organism to the external environment, while the neocerebellum has as its function the relating of the various parts of the organism to each other. In archaic times and in primitive forms of animal life, such as those swimming in water, it must have been much more important for animals to be properly related to the environment and not so necessary for the various parts of their bodies to perform motor functions accurately in relation to each other. As evolution proceeded and our distant ancestors emerged from the water and began to be land-living animals, it became necessary for them to use their extremities accurately with respect to each other. The neocerebellum served this function. Therefore, in paleocerebellar lesions one sees disturbances of gait and vestibular disturbances, while in the neocerebellar lesions one sees tremors, asynergy, the rebound phenomenon and so forth.

DR. JOE R. BROWN, Minneapolis: My formulation of the syndromes was based on what was known of cerebellar anatomy in physiology and not on the clinical material that was presented in the paper. The clinical material was given primarily to illustrate conditions in which one might see these particular syndromes and not to provide documentation for them. This was apparently not clear in the body of the paper. I agree with Dr. Mackay that the part of the cerebellum which is most pronounced in the development in the animal series depends a great deal on the animal. In fish and birds, animals that have to maintain equilibrium, the vestibular portions of the cerebellum are greatly enlarged in comparison with the other parts. When animals live on land the anterior lobe becomes decidedly enlarged. When animals begin to use their extremities individually and independently for voluntary action, then the posterior lobes becomes appreciably enlarged. So the whole history of the cerebellum has been one of development in relation to the particular needs of the organism. To my knowledge the only sensation that is involved in cerebellar disease is the sensation of being able to determine weights. In unilateral lesions of the posterior lobe, either right or left, there will be some diminution in ability to assay weights properly. It is proposed by several authors that this inability is the result of the hypotonia which occurs with lesions of the posterior cerebellar lobe. Because of the diminished tone in the arm, the weight doesn't feel the same. It is possible therefore to erroneously localize a cerebellar lesion to the opposite parietal lobe. More commonly, in my experience, the reverse mistake is made. Parietal lobe lesions with reduced cortical sensation, too mild to be detected on usual testing, may simulate the ataxia of a lesion of the opposite posterior cerebellar lobe.

Scrub Typhus.—Chloromycetin has been shown to be a highly effective therapeutic agent in experimental rickettsial infections; furthermore, laboratory studies suggested that this drug might be a useful prophylactic drug against scrub typhus in man. The results of studies in patients with tsutsugamushi disease indicated (Smadel et al: *Science* **108**: 160-161, 1948) that this once dread infection could be reduced to a nonfatal illness in which the fever terminated, on the average, in 30 hours after chloromycetin treatment was begun.—Joseph E. Smadel, Robert Traub, Herbert L. Ley Jr., Cornelius B. Philip, Theodore E. Woodward and Raymond Lewthwaite, *American Journal of Hygiene*, July 1949.

PROPHYLAXIS OF GONORRHEAL OPHTHALMIA OF THE NEWBORN

V. Comparison of Effectiveness of Penicillin and Silver Nitrate

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Although it has been known for several centuries [1] that ophthalmia neonatorum probably resulted from contamination of the conjunctiva during the passage of the child through the birth canal, it remained for Crede [2] to make the first great contribution to the prophylaxis of this infection. Since his introduction of the silver nitrate method of prophylaxis, there has been a remarkable reduction of gonorrheal conjunctivitis and its complications in the newborn. In spite of this there have been persistent criticisms of the use of the drugs, and numerous substitutes have been proposed. However, none has seemed to offer the advantages of the silver compounds until the introduction of penicillin. Therefore the following study was made in an attempt to compare the effects of silver nitrate and penicillin in the prophylaxis of gonorrheal conjunctivitis of the newborn.

METHODS

As previously reported,[3] studies of the bacterial flora of the antepartum cervix were made on the average ten days before delivery.

Under aseptic conditions, the cervix was exposed to direct view and the surface cleansed with sterile applicators. A sterile cotton applicator was applied to the external os and immediately immersed in 1 cc. of meat infusion broth in a sterile culture tube. The broth tube was taken to the laboratory at once, and subcultures were made on blood agar and chocolate agar plates. After the plates were smeared, the cotton applicator was returned to the broth tube and incubated at 37.5 C. under aerobic conditions. The blood agar plate also was incubated under aerobic conditions, but the chocolate agar plate was incubated at 37.5 C. under 10 per cent carbon dioxide tension. Examinations of the broth tubes and culture plates were made after twenty-four, forty-eight and seventy-two hours. All growth and colonies were examined and identified.

The bacterial flora of the conjunctiva of the newborn was studied by similar culture methods.

Immediately after section of the cord the lids were cleansed with a sterile, dry, gauze sponge. While the lids were held open a small, dry, sterile, cotton applicator was passed gently over the palpebral conjunctiva of the lower and upper lids and into the fornices; it was then immersed in a sterile tube containing 1 cc. of meat infusion broth. A separate applicator and tube of broth were used for each eye. The tube was labeled with the baby's name and eye and immediately taken to the laboratory, where subcultures were made as described in the preceding section.

Studies of the bacterial flora were repeated in an identical manner twenty-four hours after delivery.

Three methods of prophylaxis were studied. In one series of infants a comparison was made of the effectiveness of local applications of silver nitrate and penicillin. In this series, immediately after the conjunctival culture had been made 1 drop of 1 per cent silver nitrate solution was instilled into the conjunctival sac of the right eye. The lids were held open during the application and for a minimum of 30 seconds afterward in order to insure an adequate exposure of the conjunctiva and its contents to the drug. The left eye was treated by the application of penicillin ointment, made up in a concentration of 100,000 units of penicillin per gram of ointment base. The lids were opened widely and an adequate amount of the ointment (approximately 0.1 Gm.) was applied to insure complete exposure of the conjunctiva and its contents to the drug. Three hours later, after the baby had been bathed, the prophylactic procedures were repeated in an identical manner, using 1 drop of 1 per cent silver nitrate solution for the right eye and penicillin ointment for the left eye. In another series of infants a local prophylactic agent was not used; however, in these cases the mother had been given an intramuscular injection of 600,000 units of penicillin of the repository type at the onset of labor. If and when the mother had been in labor twenty-four hours, the injection of 600,000 units of penicillin was repeated. On the average the mothers received one injection of penicillin four to six hours before delivery. Although local prophylactic agents were not used in the babies whose mothers had received the penicillin, culture studies of material from the conjunctiva were made immediately after delivery and again twenty-four hours later.

TABLE 1.—*Frequency of Occurrence of Organisms in Antepartum Cervical Cultures*

Organism	Patients	Per Cent
Streptococci of the viridans group	267	50.3
Staph. aureus (hemo)	195	38.7
Staph. epidermidis albus	137	25.6
Candida albicans	109	20.5
Hemolytic streptococci	55	10.3
Anhemolytic streptococci	33	6.2
Esch. coli	26	4.9
Sarcina	17	3.2
B. subtilis	9	1.7
Candida stellatoidea	9	1.7
N. gonorrheae	8	1.5
C. pseudodiphtheriticum	8	1.5
Hemolytic Staph. albus	5	.9
C. xerose	5	0.9
H. influenzae	5	0.9
Ps. aeruginosa	3	0.6
N. flava	1	0.2
Staph. citreus	1	0.2
D. pneumoniae	1	0.2
A. aerogenes	1	0.2
H. hemolyticus	1	0.2
Candida Krusei	1	0.2
Candida guilliermondi	1	0.2
No bacteria	15	2.8

The results were tabulated on the basis of the types of bacteria grown or the absence of bacteria. No attempt was made to record the number of colonies of the various types of organisms, nor was any effort made to subdivide or type strains of a given organism. Each organism that was isolated was recorded as one contamination, for it represented either a potential or an actual contamination of the conjunctiva. Records were made of each eye separately because each was considered as an entity capable of harboring a different type of contamination.

The penicillin used in this study was furnished by E. R. Squibb & Son.

Read before the Section on Ophthalmology at the Ninety-Eighth Annual Session of the American Medical Association, Atlantic City, N. J., June 9, 1949.

The Department of Obstetrics and Gynecology made the patients available for this study, which was approved by Dr. Walter L. Bierring and the Iowa State Department of Health.

From the Department of Ophthalmology, State University of Iowa Medical School. Aided in part by a grant from the Iowa Foundation for the Advancement of Science in Ophthalmology.

1. Allen, J. H., and Barrere, L.: Prophylaxis of Gonorrheal Ophthalmia of the Newborn: I. Review of the Literature, to be published.

2. Crede: Die Verhütung der Augenentzündung der Neugeborenen, Archiv. f. Gynaek. **17**: 50-53, 1881; **18**: 367-370, 1881; **21**: 179-195, 1883.

3. Barrere, L., and Allen, J. H.: Prophylaxis of Gonorrheal Ophthalmia of the Newborn: III. Bacterial Flora of the Ante Partum Cervix, to be published.

RESULTS

The study of the bacterial flora of the antepartum cervix, as previously reported,[3] was made on 531 women and revealed no growth of bacteria in material from 2.8 per cent (table 1). Of the 97 per cent of samples showing colonies on the culture mediums, several showed more than one organism. Colonies of N. gonorrheae were found in cultures from only 8 patients, or 1.5 per cent of the series. The organism found most frequently was a Streptococcus of the viridans group. It occurred in 267, or 50 per cent, of the patients. Staphylococcus aureus was found in 195, or 36 per cent, and Staphylococcus epidermidis albus in 137, or 25 per cent. Higher bacteria occurred in 120, or 22 per cent, of the patients. In this group Candida albicans was the organism most frequently identified, being found in 109, or 20 per cent, of the patients. Hemolytic streptococci were found in 55 cases, or 10 per cent. Several other organisms were found less frequently (table 1).

The frequency with which the various strains of bacteria were found on the conjunctiva of the newborn immediately after delivery is recorded in tables 2 and 3. These data are recorded separately for the babies whose mothers had been given intramuscular injections of penicillin during labor and for the babies whose mothers had not been treated.

TABLE 2.—*Group Frequency of Organisms Occurring on the Conjunctiva of the Newborn*

	Series A *		Series B †	
	No. of Eyes	Per Cent	No. of Eyes	Per Cent
No bacteria	863	66.1	600	66.5
Gram-positive cocci	412	31.5	196	21.7
Gram-positive rods	65	5.0	30	3.3
Gram-negative rods	25	1.9	75	8.3

* Series A includes infants of mothers who had not received treatment which would alter the cervical bacterial flora.
† Series B includes infants of mothers who had received penicillin intramuscularly at onset of labor.

Approximately two thirds of the conjunctivas of infants in the two series of cases remained free from contamination; 66 per cent of the babies of untreated mothers and 66 per cent of the babies of the penicillin-treated mothers. However, cultures of material from the conjunctiva of the babies of the untreated mothers showed more gram-positive cocci and fewer gram-negative rods than those from the babies whose mothers had received penicillin during the labor. Gram-positive cocci were found in cultures from 412 eyes, or 31.5 per cent, of infants in the untreated group, whereas they were found in material from 196 eyes, or 21.7 per cent, of those in the treated group. Gram-negative rods were found in material from 25 eyes, or 1.9 per cent, of the untreated group, and in 75, or 8.3 per cent, of the treated group.

N. gonorrheae was not found in cultures from the conjunctivas in either group of cases.

The frequency of occurrence of the various strains of bacteria in cultures of the newborn twenty-four hours after delivery is recorded in tables 4 and 5. The data were recorded separately for babies whose eyes had been given prophylactic treatment locally with silver nitrate solution and locally with penicillin ointment, and for babies whose eyes had not been given local treatment but whose mothers had been given penicillin intramuscularly during labor.

Again approximately two thirds of the conjunctival cultures failed to reveal bacteria. However, there was a tendency for more bacteria to be present on the eyes treated with silver nitrate than on those treated with penicillin. Cultures of material from only 61 per cent of the silver-nitrate-treated eyes failed to exhibit growth of bacteria, whereas 71 per cent of cultures failed to produce bacterial growth after local penicillin treatment of the eyes, and 73 per cent failed to produce bacterial growth after no local treatment of the eyes. The principal difference between these figures seems to be in the number of gram-positive cocci found on the conjunctiva. In the silver-nitrate-treated eyes, 43 per cent of cultures showed gram-positive cocci whereas in the eyes receiving penicillin locally only 32 per cent and in the eyes receiving no local treatment only 27.9 per cent of cultures showed gram-positive cocci.

TABLE 3.—*Frequency of Occurrence of Organisms in Cultures of Conjunctiva of Newborn*

	Number	Per Cent
Series A *		
No bacteria	863	66.1
Staph. aureus	193	14.8
Staph. epidermidis albus	109	8.3
Sarcina	42	3.2
Streptococci of the viridans group	34	2.6
C. xerose	28	2.1
Candida albicans	25	1.9
C. pseudodiphtherieum	22	1.7
Esch. coli	20	1.5
Staph. albus (hemo)	17	1.3
B. subtilis	15	1.1
Staph. citreus	6	0.4
Anhemolytic streptococci	6	0.4
Hemolytic streptococci	5	0.4
A. aerogenes	3	0.2
Ps. aeruginosa	1	0.1
P. vulgaris	1	0.1
Series B †		
No bacteria	600	66.5
Staph. aureus	95	10.5
E. coli	63	7.0
Staph. epidermidis albus	40	4.4
Candida albicans	35	3.9
Sarcina	25	2.8
C. xerose	21	2.3
Streptococci of the viridans group	20	2.2
B. subtilis	8	0.9
Staph. citreus	5	0.5
A. aerogenes	5	0.5
Staph. albus (hemo)	4	0.4
Hemolytic streptococci	4	0.4
Ps. aeruginosa	4	0.4
Anhemolytic streptococci	3	0.3
C. pseudodiphtherieum	1	0.1
P. vulgaris	1	0.1
P. morganii	1	0.1
H. influenzae	1	0.1

* Series A includes infants of mothers who had not received treatment which would alter the cervical bacterial flora.
† Series B includes infants of mothers who had received penicillin intramuscularly at onset of labor.

The difference in distribution in gram-negative rods was not significant in the cultures of material from conjunctivas of infants twenty-four hours old.

In another small series of cases there were 70 babies whose mothers were given penicillin during labor and whose eyes also received local prophylaxis (table 6). Silver nitrate drops were instilled into the right eye and penicillin ointment into the left eye, by the method previously described. While this series of cases was too small for evaluation, there seemed to be no particular difference between the conjunctival cultures of the two eyes twenty-four hours after delivery.

The babies were observed daily while in the hospital following delivery, an average of six to eight days. Outpatient observation was impossible because of the distances of their homes from the hospital.

In the short period of observation following delivery, conjunctivitis developed in 22 patients. Six of these were infections superimposed on obstruction of the nasolacrimal passages. The obstruction occurred in 4 patients who did not receive local prophylactic treatment and in 2 infants in the eye which had received silver nitrate drops locally. Infection was due to Staph. aureus in 4 of these cases, hemolytic Staph. albus in 1 case and Sarcina conjunctivae in 1 case.

Inclusion blennorrhea developed in 3 patients. In 1 infant who had not received local prophylaxis but whose mother had been given penicillin intramuscularly during labor the infection was discovered on the third day after delivery. In this case the membranes had ruptured two and one-half days before the onset of labor. Six hundred thousand units of penicillin had been administered to the mother one-half hour after the onset of labor and four hours before the infant had been delivered. In 2 infants who had been given local prophylaxis with silver nitrate in the right eye and with penicillin ointment in the left eye inclusion blennorrhea developed simultaneously in both eyes on the eighth day after delivery.

Table 4.—*Bacterial Flora of the Conjunctiva of the Infant 24 Hours of Age*

	Local Prophylaxis					
	Silver Nitrate		Penicillin Ointment		None*	
	O.D.	Per Cent	O.S.	Per Cent	Eyes	Per Cent
Total eyes	653	....	653	....	702	....
No bacteria	399	61.1	466	71.4	539	73.3
Staph. aureus	160	24.5	116	17.8	128	16.8
Staph. epidermidis albus	72	11.0	54	8.3	56	7.3
Staph. albus (hemo)	12	1.8	12	1.8	5	0.6
Staph. citreus	5	0.8	5	0.8	1	0.1
Streptococci of the viridans group	8	1.2	6	0.9	8	1.0
Hemolytic streptococci	3	0.4	..	...	2	0.3
Anhemolytic streptococci	1	0.1	..	...	..	...
Sarcina	21	3.2	15	3.3	13	1.7
Sarcina conjunctivae	1	0.1	2	0.3	..	...
C. xerose	9	1.4	6	0.9	2	0.3
C. pseudodiphtherieum	7	1.1	4	0.6	3	0.4
B. subtilis	11	1.7	7	1.1	2	0.3
Esch. coli	..	...	1	0.1	11	1.4
Ps. aeruginosa	..	...	..	...	1	0.1
Candida albicans	..	...	..	...	1	0.1
Candida stellatoidea	..	...	..	...	2	0.3

* Mothers had been given penicillin intramuscularly at onset of labor.

Acute catarrhal conjunctivitis developed in 13 other babies. In 1 the infection was due to a Streptococcus of the viridans group and originated in the eye which had received penicillin ointment locally as a prophylactic procedure. The remaining 12 cases were due to Staph. aureus; 8 developed in eyes which had not received local prophylaxis and 4 originated in eyes which had received either silver nitrate drops or penicillin ointment locally. In all these cases the conjunctivitis developed later than the fifth day after birth.

Chemical conjunctivitis was observed in all eyes in which silver nitrate prophylaxis was used. It developed from eight to twenty-four hours after delivery and lasted twelve to twenty-four hours. It varied from a mild catarrhal conjunctivitis to a moderate purulent form, but there were no sequelae.

Neither chemical conjunctivitis nor sensitivity reactions were observed in the eyes in which penicillin was used.

COMMENT

In the course of this study N. gonorrheae was found in cultures of material from the cervices of 8 of 531 indigent antepartum patients. Approximately ten years previously Tucker, Trussell and Plass,[4] using similar technics, isolated N. gonorrheae from 20 of 500 indigent antepartum patients. This reduction in the incidence of N. gonorrheae in cultures of material from the antepartum cervix from 4 per cent in 1938 to 1.5 per cent in 1948 probably represented a real reduction, inasmuch as it paralleled a similar lowering of gonorrheal infections in the Gynecology Clinic.

Table 5.—*Group Frequency of Organisms Occurring in Cultures from the Conjunctiva of Infants 24 Hours of Age*

	Local Prophylaxis					
	Silver Nitrate	Per Cent	Penicillin Ointment	Per Cent	None*	Per Cent
Total eyes	653	100.0	653	100.0	702	100.0
No bacteria	399	61.1	466	71.4	539	73.3
Gram-positive cocci	282	43.2	210	32.1	213	27.9
Gram-positive rods	27	4.1	17	2.6	7	0.9
Gram-negative rods	..	....	1	0.1	12	1.6

* Mothers had been given penicillin intramuscularly at onset of labor.

The contrast between the high incidence of streptococci of the viridans group in the cultures of the cervical material, approximately 50 per cent, and the low incidence in cultures from the conjunctiva of the newborn, 2.6 per cent, was striking and suggested that the conjunctiva was seldom contaminated by passage through the cervix. However, the incidence of all types of contamination of the conjunctivas of the newborn was approximately 34 per cent. Thus it would seem that contamination occurred more frequently in the lower part of the vagina, a location not ordinarily compatible with the existence of N. gonorrheae.

Table 6.—*Bacterial Flora of the Conjunctiva of Infants 24 Hours of Age Who Had Combined Prophylaxis**

	O.D. Silver Nitrate	O.S. Penicillin Ointment
No bacteria	29	35
Hemolytic Staph. aureus	34	30
Staph. albus	19	12
Hemolytic Staph. albus	3	2
Staph. citreus	4	2
C. xerose	1	1
C. pseudodiphtherieum	1	0
Anhemolytic streptococci	1	1
Esch. coli	1	0
Ps. aeruginosa	1	0
Sarcina	0	1
B. subtilis	1	0

* Mother had been given penicillin intramuscularly at onset of labor.

Approximately the same number of eyes were contaminated by passage through the birth canal whether or not the mother had been given penicillin intramuscularly at the onset of labor. The essential difference in the two series was the higher frequency of gram-positive cocci in the babies whose mothers had not been treated with penicillin and the higher incidence of gram-negative rods in the babies of mothers who had

4. Tucker, W. W.; Trussell, R. E., and Plass, E. D.: Latent Gonorrhoea in Obstetric Patients, Am. J. Obst. & Gynec. 38:1055-1060 (Dec.) 1939.

been treated with the drug. Perhaps this should have been expected from knowledge of the action of the drug on the two types of bacteria.

The local administration of either silver nitrate solution or penicillin ointment apparently did not alter greatly the bacterial flora of the conjunctiva of the newborn. Cultures made from the conjunctiva twenty-four hours after the administration of the prophylactic agents locally were free from bacteria in approximately two thirds of the cases. After silver nitrate prophylaxis 61 per cent of the conjunctival cultures did not reveal bacteria, whereas after application of penicillin ointment 71 per cent did not reveal bacteria. The essential difference in the two series was the smaller incidence of gram-positive cocci in the conjunctival cultures of the infants treated with penicillin ointment locally. This was emphasized by the fact that conjunctival cultures from the infants who did not receive local prophylaxis but whose mothers had been given penicillin intramuscularly showed no growth of bacteria in approximately 73 per cent of the eyes after twenty-four hours of life. The essential difference between this and the other two groups was the smaller number of eyes from which conjunctival cultures exhibited growth of gram-positive cocci.

The postpartum courses of infants of these various groups did not show significant variation in conjunctival infections or nasolacrimal obstruction. Four cases of obstruction were observed in infants whose mothers had received penicillin intramuscularly; 2 infants had nasolacrimal obstruction in eyes which had received silver nitrate prophylaxis. Although the ratio was 2 to 1, it probably was insignificant. However, it indicated that silver nitrate prophylaxis did not tend to increase nasolacrimal obstruction.

Cases of acute catarrhal conjunctivitis, principally due to Staph. aureus, developed on the average six to eight days after delivery. Therefore, these probably were acquired exogenous contaminations of the conjunctiva rather than birth canal infections.

In 3 infants inclusion blennorrhea developed in 2, after penicillin prophylaxis and in 1 after silver nitrate. Inasmuch as neither silver nitrate nor penicillin affects the virus of inclusion blennorrhea, this was not unexpected. Because this disease is self limiting, without sequelae and of low incidence, prophylactic procedures have not been considered important.

Chemical irritation without sequelae was observed in all eyes in which silver nitrate had been used. This verified the experience with silver nitrate prophylaxis in this clinic over the past twenty-five years. With an adequate exposure of the drug to the conjunctiva and its contents, irritation always develops. However, in over 4,000 infants in whose eyes 2 per cent silver nitrate was used, and in over 14,000 infants in whose eyes 1 per cent silver nitrate was used, sequelae did not result.

Chemical conjunctivitis was not observed from the use of penicillin locally, and sensitivity reactions were not seen in babies either after the local use of the drug or after intramuscular injection into the mother at the onset of labor.

In conjunction with this study Keettel and Plass [5] of the Department of Obstetrics made observations on the postpartum courses of the mothers. An additional dose of 300,000 units of penicillin was administered to each mother who had received penicillin at the onset of labor. The second injection was made tweny-four hours after the antepartum injection of 600,000 units. The treated group showed a significantly lower incidence of postpartum fever and infections than did the control group of untreated mothers.

5. Keettel, W. C., and Plass, E. D.: Additional Data on Prophylactic Administration of Penicillin to Obstetric Patients, to be published.

CONCLUSIONS

1. The diminishing incidence of Neisseria gonorrheae in cultures from the antepartum cervix points toward the possibility of completely eliminating this type of infection.

2. Complete elimination of gonorrheal infection is the best solution for the prevention of acute gonorrheal conjunctivitis of the newborn and would eliminate the necessity of prophylactic procedures.

3. Until the infection is completely eliminated, careful routine prophylaxis should be employed.

4. Exposure of the conjunctiva to 1 per cent or 2 per cent solution of silver nitrate for a time adequate for the prevention of gonorrheal conjunctivitis results in chemical irritation without sequelae.

5. The occurrence of exogenous conjunctivitis of the newborn is not affected by procedures designed for the prevention of infections caused by birth canal contamination of the conjunctiva.

6. The incidence of nasolacrimal obstruction in the newborn was not significantly different after silver nitrate prophylaxis than after penicillin.

7. The occurrence of inclusion blennorrhea in the newborn was not affected by either silver nitrate or penicillin prophylaxis.

8. From the data in this study, penicillin has no advantage over silver nitrate in the prophylaxis of gonorrheal conjunctivitis of the newborn. However, because of the low incidence of gonorrheal infection in this material an adequate comparison was not possible.

9. Therefore, similarly controlled studies should be made in a population with a higher incidence of gonorrheal infections.

10. Until adequate bacteriologic controlled trial of penicillin has been made, the safest procedure for routine use is careful application of 1 per cent silver nitrate solution to the conjunctiva immediately after delivery and again after the infant has been bathed.

ABSTRACT OF DISCUSSION

DR. ALAN C. WOODS, Baltimore: The careful comparative study by Drs. Allen and Barrere of the bacterial flora of the antepartum cervix, of the conjunctival flora of the newborn infant and of material from the same eyes twenty-four hours after the local use of silver nitrate and penicillin, has yielded valuable information. Their study gave evidence of the excellent planning and their conclusions were conservative. It is only by numerous such studies from many clinics that sufficient data can be amassed and the question of the comparative value of silver nitrate and penicillin as a prophylaxis against gonorrheal conjunctivis in the newborn can be answered. These studies indicate that, although the incidence of gonorrhea is decreasing, the incidence in pregnant women is still sufficiently high to necessitate some form of prophylaxis for the newborn infant. Further, in this relatively small series silver nitrate and penicillin were equally efficacious, although neither controlled a later nongonorrheal conjunctivitis or an inclusion blennorrhea. Silver nitrate has the disadvantage of producing a chemical conjunctivitis, which, although unimportant, is probably disturbing to the mothers. Drs. Allen and Barrere finally conclude that, until adequate study under bacteriologic control has been made, the safest procedure for routine use is the careful application of a 1 per cent silver nitrate solution immediately after delivery and again after the infant has been bathed. This is in accord with the opinion of the subcommittee of the New

York Academy of Medicine (1947) and of the special committee of the Academy (1948). Although it is probable that ultimately some form of antibiotic prophylaxis may supplant the use of silver nitrate, until further investigation establishes the superiority of penicillin prophylaxis it is wiser not to recommend a change in the existing laws. The practical immediate question is whether the investigations on the comparative value of these two forms of prophylaxis have progressed sufficiently to recommend any change in the prevailing customs. The investigation reported here today is but one of many on the same subject. It has been explored on a large scale for several years by Dr. Nicholas Eastman in Baltimore, utilizing the facilities afforded by the Women's Clinic of the Johns Hopkins Hospital and of the adjacent Mount Sinai Hospital. In Dr. Eastman's first series of approximately 6,000 births, one large group of the newborn babies received an intramuscular injection of 50,000 units of penicillin but no local prophylaxis. There were no cases of gonorrheal conjunctivitis in this group, but there were 3 unexplained deaths in syphilitic infants, in whom the possibility of a Herxheimer reaction could not be excluded, and 2 cases of sensitivity to penicillin developed in the treated infants.

Dr. Jay G. Linn Jr., Pittsburgh: A twelve month study of penicillin and silver nitrate in the prevention of gonorrheal conjunctivitis of the newborn was begun July 1, 1948 at the Elizabeth Steel Magee Hospital and concluded July 1, 1949. The bacteriologic studies in these cases were not nearly as extensive as those of Drs. Allen and Barrere. The studies were directed at determining the presence of Neisseria gonorrheae.

Penicillin was used for prophylaxis in the first and third three month periods in all newborn infants. A solution of penicillin containing 2,500 units per cubic centimeter was prepared daily. One drop of this solution was instilled in each eye at birth and daily for three days. Silver nitrate was used on all newborn infants for the second and fourth three month periods with the classic Credé method. One drop of a 1 per cent solution of the drug was instilled in each eye with a sealed wax ampule at the time of birth. No other medicament was administered to either the mother or child in this study unless for other reasons. An analysis has been made of the first nine months of this study, which includes a total of 3,214 newborn infants. Of these, 2,233 received the penicillin prophylaxis and 981 the silver nitrate. In 23, or 1 per cent, of the newborn infants of the penicillin group some conjunctival discharge developed during the first week after birth. This discharge was purulent in 6 cases, but bacteriologic studies failed to disclose N. gonorrheae. In 309 infants, or 30.4 per cent, of the silver nitrate group some conjunctival discharge appeared during the first week. Thirty-seven of these had a purulent discharge, but again bacteriologic studies revealed no organism. Five of the infants included in this study were admitted to the Eye and Ear Hospital seven to thirty-one days after leaving the Elizabeth Steel Magee Hospital for the treatment of acute purulent conjunctivitis. Two of these infants had received penicillin prophylaxis and 3 had received silver nitrate. In no instance was a positive smear or culture for N. gonorrheae obtained. None of this group had any sign of infection on leaving the maternity hospital. Conclusions from this study are similar to those of Drs. Allen and Barrere. Penicillin is as efficacious in gonorrheal prophylaxis as is silver nitrate. The purulent discharge encountered was the result of a chemical conjunctivitis and occurs much more frequently with silver nitrate. The silver nitrate routine is more practical for general usage because only one instillation is required; frequent preparation of solutions is not necessary when the wax ampules containing the drug are used.

Dr. Louis Lehrfeld, Philadelphia: There is now being completed at the Philadelphia General Hospital a one year study of the merits of silver nitrate solution compared with penicillin solution as a prophylaxis of gonorrheal conjunctivitis in the newborn. About 2,800 babies were studied. One half of them received 1 per cent silver nitrate solution and the other half an aqueous solution of penicillin, 2,500 units per cubic centimeter. In the penicillin series there were no cases of acute infectious conjunctivitis of the newborn. In the silver nitrate series 5 cases of gonorrheal conjunctivitis developed, with cure in each case in twenty-four hours with penicillin therapy. In reviewing this paper, my attention was attracted by the fact that silver nitrate caused a burn resulting in chemical conjunctivitis in every instance. Drs. Allen and Barrere claim that cure of gonorrhea in the mother would eliminate the necessity of any prophylaxis. This has been my teaching during the past fifteen years. They say that 61 per cent of the eyes examined had no bacteria after silver nitrate prophylaxis, 71 per cent had no bacteria after penicillin and 73 per cent had no bacteria when nothing was used in the eyes of the newborn but the mother had been treated with penicillin. The inference therefore should be that nothing should be put in the eyes of the newborn. I cannot understand the conclusion of Drs. Allen and Barrere that silver nitrate prophylaxis is as good as penicillin. Their own experiment proves otherwise. Only 8 mothers had gonorrhea, and none of the babies had gonorrheal conjunctivitis regardless of what was placed in their eyes. No experiment was performed by the authors in the actual presence of gonorrheal conjunctivitis of the newborn. Therefore the statements of the authors that they see no advantage of penicillin over the silver compound are not consistent with their own results. Since the ointments cannot be sterilized, how would the ointment base of the penicillin administered by the authors, influence the result of their experiment? I offered statistics at the last Annual Session of the American Medical Association pointing out that every case of acute infectious conjunctivitis of the newborn can be cured by penicillin therapy and not a single case can be cured by treatment with a 1 per cent solution of silver nitrate. If the silver compound has such mystic properties in the prevention of the disease, why is it so lacking in the cure of the disease? No one in this audience would use 1 per cent silver nitrate in the treatment of gonorrheal conjunctivitis in place of the antibiotics with their acknowledged efficacy. It is my personal opinion that silver nitrate prophylaxis is on its way out.

Dr. James H. Allen, Iowa City: I agree with Dr. Lehrfeld that silver nitrate is probably on the way out, but I am not certain that penicillin is the drug to take its place. Most statistics on this subject are based on observations and information obtained in hospitals where babies are kept under careful control. Should an inflammation begin, treatment can be started immediately before complications develop. Therefore I believe it is safe and proper to use comparative prophylactic procedures under these circumstances. However, a great many deliveries still take place in the home, which means that the newborn child does not have adequate supervision for experimental work following the delivery. For these babies I believe that a change of prophylactic procedure should not be made until it has been possible completely to prove from a bacteriologic point of view that it is safe to use another drug. Perhaps Dr. Lehrfeld will not agree with me that use of silver nitrate is a proved procedure. However, I should like to assure him that from the experimental point of view it is entirely effective, although in many instances the technic of administration of the drug may be questioned. Therefore I believe that physicians should concentrate on teaching the proper technic of administration of silver nitrate until another procedure has been proved from the experimental point of view. I should like to call attention to the fact that the difference between 61 per cent and 73 per cent sterile cultures from a conjunctiva is statistically insignificant in this series of cases, especially since it indicates a variation only in normal flora. I should also like to urge extreme caution in making an etiologic diagnosis of conjunctivitis of the newborn after the use of penicillin. I do not intend to imply that I think any reports have been made in error, but I want to call attention to the fact that there is a radical change in the cell structure of bacteria and their colonies after their exposure to the antibiotic drugs. Therefore I would be especially careful in making the exact etiologic diagnosis of conjunctivitis which may develop after treatment with penicillin. Some of the most difficult cases from a diagnostic point of view are those in which patients have been treated with penicillin, have failed to improve and then have been brought to the physician for diagnosis and further treatment. The cell structure of the organisms is so altered that they are extremely difficult to classify and diagnose.

Special Article

MEDICAL CARE ASPECTS OF PUBLIC HEALTH AND WELFARE IN JAPAN

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The four fundamental elements of the health and welfare program in Japan are preventive medicine, medical care, welfare and social security. This paper will be limited to a summary of the preventive medicine aspects of the program and a brief discussion of the medical care aspects.

ORGANIZATION

Prior to the termination of the war in 1945, there was only a primitive public health and welfare organization in Japan.

It was obvious that in order to carry out the health and welfare program a sound organization from the national to the local level would have to be established. This organization would necessarily have to conform to the general reorganization of the Japanese government in accordance with the new constitution adopted after the termination of the war. In order to clarify the situation in Japan as compared to that in the United States, it is essential to bring out the fact that the Japanese government is national in form. It is not a deferral government like that of the United States, in which residual legislative power rests in the states. In Japan, residual legislative power under the constitution rests in the Diet, which is the national legislative body. There are no state constitutions and, under the local autonomy law, state or local assemblies may pass legislation only as authorized by the National Diet. Therefore, health and welfare legislation in Japan is national in character, rather than state or local as in the United States.

The Ministry of Health and Welfare.—Since health and welfare legislation is national, an agency of the executive arm of the national government must necessarily exist to execute the laws. The Ministry of Health and Welfare, first established in 1938, is one of the cabinet ministries of the executive arm of the Japanese government. This ministry has been reorganized to integrate the four fundamentals of health and welfare. Labor activities formerly in the ministry were removed and incorporated in a new Ministry of Labor. No one of the four fundamental aspects of the health and welfare program is permitted to dominate the others, but all are on a co-equal and integrated basis, and each is headed by professionally qualified personnel from the national to local level.

The Prefecture (State) Departments.—Health departments and welfare departments has been established in all prefecture (state) governments on a co-equal status with other major departments of the prefecture governments. Within these departments are found the same essential functions as in the Ministry of Health and Welfare. They are charged with the administration of the national health and welfare laws in the prefecture.

Health Center Districts.—Health center districts have been established within the prefectures, one district for approximately each 100,000 population. The district is based on population flow or trade areas rather than on political subdivisions such as city, town or village boundaries. These health center districts administer the local health laws and programs; they contain at least one completely organized and staffed health center and as many branches as may be required.

Within the district health center organization a Medical Affairs Division has been established, in order to integrate the preventive medicine functions of the health center with the medical care agencies within the district, by establishing liaison with the local medical association and medical care facilities, such as physicians' offices, hospitals and sanatoriums. This division is also charged with the responsibility of inspecting medical care facilities to determine whether minimum standards established under the new medical services law have been met.

A Division of Medical Social Service acts as a link between the preventive medicine functions of the health center and the welfare and social security agencies within the district.

PREVENTIVE MEDICINE ASPECTS

General.—It will be possible only to mention a few of the more important of the communicable disease control programs which have been carried out within the last four years. Prior to 1945, Japanese standards of sanitation were far below those of modern progressive nations. No attempt had been made to control insects and rodents. Public water and sewage systems, which existed only in the larger cities, had been severely damaged as a result of bombings. Most of the large cities were partly destroyed by fire. People were crowded together in the remaining available shelter. Resistance to any infection was low, after years of an exceedingly restricted and unbalanced diet. There was a continuous mass movement of people into and out of the cities to obtain food. There was another mass movement of people into and out of Japan; over 6,000,000 persons were repatriated from all over the Far East to Japan, and approximately 1,000,000 foreign nationals, mostly Koreans and Chinese, were repatriated from Japan to their own countries. In such circumstances, it could be anticipated that major outbreaks of communicable diseases would occur.

Tuberculosis.—Tuberculosis has been the leading cause of death in Japan since 1934. Since 1932 the annual tuberculosis death rate had increased steadily until it reached a peak of 280 per 100,000 population in 1945. The rate has been among the highest in the world for the last thirty years. As it was considered a shameful disease, to be concealed whenever possible, few clinical cases were brought to the attention of medical authorities.

A control program was inaugurated by the Supreme Command of the Allied Powers. As a part of that program, approximately 31,000,000 persons had received BCG immunizations up to May 1949. The control program has resulted in a reduction in the mean annual death rate from 280 per 100,000 population in 1945 to 181.1 in 1948. Analysis of the deaths by age groups indicates that the entire reduction has occurred in the age groups immunized with BCG. The death rate in nonimmunized groups has not been appreciably reduced during this period. Within the immunized groups the mortality has been reduced by 88 per cent.

The BCG immunization programs will, in the future, prevent the occurrence of most of the cases of clinical tuberculosis. However, authorities are still faced with the problem of reducing deaths among that part of the population in which clinical tuberculosis has already developed. A production program for streptomycin has been undertaken, and within the next two years it is hoped that patients will receive it in all cases suitable for such treatment. It is, of course, too early to publish a detailed report on the results of this tuberculosis control program, which is considered a major program. However, it is believed that the evidence so far revealed is inescapable and cannot be ignored.

Enteric Diseases.—The enteric diseases, which were the second leading cause of death in Japan, have been reduced through a combination of environmental sanitation control and immunization and are now the third leading cause of death. Of the enteric diseases, dysentery and typhoid will be mentioned.

Dysenteries: Health education and the work of six-man sanitary teams operating as a part of the health center organization throughout the entire nation have reduced the morbidity rate of the dysenteries from a mean annual rate of 101.6 per 100,000 population for the period 1938 to 1945 to 18.3 in 1948, a reduction of 82 per cent.

Typhoid: From a mean annual morbidity rate of 63.9 per 100,000 population for the period 1938 to 1945, the typhoid rate has been reduced to 11.8 in 1948. The task of giving three inoculations, with annual booster doses, to approximately 60,000,000 persons between the ages of 3 and 60 years is a tremendous one. A considerable further reduction can be expected in typhoid and paratyphoid rates when the immunization program is completed.

Pneumonia.—Pneumonia, formerly the third leading cause of death in Japan, has been reduced from a mean mortality rate of 157.8 per 100,000 population for the period 1938 to 1943 to 66.6 in 1948; it is now the sixth leading cause of death. A further reduction can be expected, because the production of penicillin and sulfonamide drugs of good quality has been sufficient to meet all requirements only within the last year. Introduction into Japan of these drugs has been largely responsible for the reduction in mortality, as could be expected.

Infant Mortality.—Infant mortality has been reduced from a mean rate for the period 1938 to 1943 of 94.9 per thousand live births per annum to a mean mortality rate of 61.5 in 1948.

Smallpox.—As could be expected under conditions existing in 1945, a smallpox epidemic involving 17,800 persons developed, with a mean morbidity rate of 23.7 per 100,000 population in 1946. The entire nation of 80,000,000 persons has been immunized. The program has been effective so far. Only 29 cases of smallpox occurred throughout the entire nation during 1948.

Typhus.—Typhus, which had been steadily increasing since 1938 in annual epidemics, reached a peak mean morbidity rate of 41.5 per 100,000 population annum in 1946. Forty-eight million persons have been dusted with DDT (4,4'-dichlorodiphenyltrichoroethane), and 8,892,000 have been immunized with typhus vaccine. For the year 1948 the mean morbidity rate for typhus was 0.6.

Diphtheria.—The average mean annual morbidity rate for diphtheria for the period 1938 to 1945 was 75.5 per 100,000 population. The peak was reached in 1944 with an annual mean morbidity rate of 129.9. Diphtheria toxoid was unknown to the Japanese. Eighteen million children, 10 years of age and under, are being immunized with toxoid. The mean morbidity rate for 1948 is 20.3. This constitutes a reduction of 73 per cent from the period 1938 to 1945.

Health Statistics.—The average mean crude death rate for the period 1938 to 1945 of 18.3 per 1,000 population, which reached a high mean rate of 29.2 in 1945, has been reduced to 11.9 in 1948. The reduction has been largely due to the programs previously mentioned.

MEDICAL CARE

General.—On May 1, 1949 there were 71,286 physicians in Japan, 1 to each 1,122 persons, which places Japan fifth among the nations, as far as the number of physicians in relation to population is concerned.

Practice of Medicine.—Of the 71,286 physicians in Japan, 46,945 are in general practice. The majority of general practitioners are so-called second class doctors. Long before the war the Japanese adopted a policy (which is used in many countries throughout the world in an effort to solve the problem of maldistribution of an insufficient number of doctors) of providing a cheap, short term education to young men who, it was hoped, could thereby be induced to practice medicine in the rural areas.

Under the old Japanese law, hospitals of ten beds or more were closed hospitals, whether private or government operated. Staffs were paid on a salary basis. Inpatients were derived from large outpatient services. There were 3 outpatients for each inpatient reported. Group practice of medicine has been carried on in Japan through these outpatient clinics for many years. The general practitioner, under the old law being excluded from admitting patients to hospitals, was allowed to have what was called a "less-than-ten-bed" hospital, which in most cases was simply one or more rooms containing ten mats. He made his living largely by selling drugs and inducing patients to remain in his so-called hospital. There was no limit to the type of practice in which he could engage. Even major surgical procedures were attempted by many of these physicians, and thousands of patients have died each year from the vicious system of second-class doctors.

Education.—Medical School Organization: Prior to 1938, eighteen medical schools of university caliber (*Daigaku*) existed in Japan, thirteen of which were government universities. One was a prefecture medical university and four were private medical schools. In addition, there were ten medical technical colleges (*Semmon Gakko*). During the war years many additional medical technical colleges were established, until in 1945 fifty-one such schools existed to produce second class doctors. All eighteen universities had both a *Daigaku* and *Semmon Gakko* as part of their establishment. There were 5,744 students enrolled in the university type of medical school and 19,654 in the technical college.

Medical education in Japan has been patterned after the European didactic system, particularly the German system, with little emphasis on laboratory or clinical

teaching. Entrance requirements to the university type of medical school were eleven years in primary school and middle school and three years in the sciences section of a university preparatory school. Internships did not exist in Japan and, on graduation, the student was automatically licensed to practice medicine. In the case of medical technical colleges, ten years of primary and middle school training were sufficient for acceptance into the medical college, the first two years of which were devoted largely to academic subjects and the last two years to medical subjects, taught by lecture. Graduates of these schools were also automatically given a medical license. Although the medical degree obtained from the technical college was different from that granted by the university medical school, the license in no way limited the type of practice. Under the rigid system of educational control in Japan, even the textbooks were prepared by or approved by the Ministry of Education. Professional associations, whether in medicine, nursing, dentistry or other professions engaged in medical care, had no voice in establishing standards of education which entitled the graduates to become members of their professions. Lay educators determined these standards.

Reorganization and Reform: Since the quality of the practice of medicine is inevitably the result of medical education, attempts to improve the quality of medical care in Japan necessitated a reorganization of the medical educational system. The Japan Medical Association expressed no interest in the reorganization of professional education. It was therefore necessary for the Supreme Command of the Allied Powers to set up a Council on Medical Education in March 1946, consisting of selected Japanese physicians, some of whom had received their professional education in the United States, England or other foreign countries. Under the guidance of the Supreme Command, this Japanese Council on Medical Education adopted certain educational reforms which, after a delay, were placed into effect by the Ministry of Education.

The proposed reform rejected the old policy of training two classes of doctors and established a goal of providing only well qualified physicians in the future. The new program requires two years of university premedical education and four years of medical school at university level, following completion of twelve years of primary and middle school. The new medical curriculum, as adopted, places emphasis on practical methods of instruction. Of the required hours, 47 per cent are devoted to the teaching of preclinical subjects, with a preponderance of these hours devoted to practical laboratory work. The remainder of the hours are devoted to clinical teaching. The distribution of time now allotted to the various preclinical courses compares favorably with that recommended by the Council on Medical Education of the American Medical Association.

Inspection of Medical Schools: All medical schools have been inspected and classified by members of the Council on Medical Education. Those which could meet the new standards by changing the curriculum and providing additional laboratory facilities have been recognized as university-type medical schools. There are eighteen of these schools. Six schools were utterly hopeless and were closed, the students being transferred elsewhere. The remainder of the schools were placed on probation. Classes in the probationary schools are permitted to continue until graduation, but no freshman classes can be admitted until the schools have met the standards for university-type schools. These probationary schools have been given until 1951 to meet the new standards of a university medical school, failing which they will be discontinued. There are twenty-one of these schools which have been on probation since the program was formally placed into effect at the beginning of the academic year, April 1, 1947.

Licensing of Physicians: A new licensing law requires examination by a National Board. Eligibility to take this examination requires one year of rotating internship and after 1951 will require graduation from a university-type school prior to internship. The desirability of continuing internships, formerly nonexistent, which has now been under test for two years, is still open to question. Under the Japanese closed hospital system, with complete paid staffs, interns were not only without a function to perform but were actually resented by many members of the staff who were not interested in training these young men. This resentment has largely disappeared, but repeated checks show that many of the interns are spending their year not in supervised practice of their profession but in studying for the national examination. Only time will determine whether the intern system has a place in Japanese medical education.

What has been stated here concerning action to reform medical education applies equally to nursing, dentistry and allied professions.

Hospitals.—Postwar Status: One thousand and twenty-seven hospitals in Japan were completely destroyed or damaged during the war, largely by fire, and at the beginning of the Occupation in 1945 there remained 2,826 civilian hospitals of ten beds or more, containing 208,178 beds. Six hundred and sixty of these institutions, with a bed capacity of 100,000, were operated either as city, state or national hospitals or by the Japanese Medical Treatment Corporation, a semigovernmental institution which had acquired a large number of hospitals prior to and during the war and which has now been dissolved. There were, in addition to the civilian hospitals, several hundred military and naval hospitals, with a capacity of 104,000 military patients.

Japanese hospitals had deteriorated during the war. Some of them had had no x-ray film for as long as three years prior to the end of the war. There was a shortage of essential drugs and instruments, since the Japanese army and navy had taken two thirds of the production of the medical supply industry. Because of shortage of cotton, dressings were used over and over, being washed in cold water and without soap, as there was a shortage of fuel to heat water and soap was rationed, one small bar per person each six months.

Nursing in Japan was considered the work of servants, so bedside nursing was practically unknown. Three classes of nurses were found who were considered doctors' assistants. The old custom, not uncommon in many other countries, of the Japanese family or a representative of the family moving into the hospital to provide bedside nursing for the patient and also to prepare his food, was the rule.

Present Status: Faced with this situation, certain actions have been taken, after long study. The Medical Service Law, which was passed in July 1948, provides

for the licensing of hospitals, based on minimum standards. Like the medical schools, all hospitals are being inspected and classified under this law, which requires certain minimum staff and essential services for twenty beds or more. Those which can meet the standards will be licensed as class A hospitals. Those which are utterly hopeless will not be licensed. Those which can meet the requirements by making certain basic changes will be placed on three years' probation. Also under this law, public hospitals are open for qualified practitioners to admit patients. The less-than-ten-bed hospitals are no longer permitted to be classed as hospitals but are classed as clinics or doctors' offices. In order to protect the patients, no patients may be retained longer than forty-eight hours in these clinics. A study is being made under the Medical Service Law as to the need for hospitals throughout the nation. Provision is made under this law for grants to the prefectures (states) for construction of hospitals where needed. An additional probationary period of two years is given where new construction is required in a locality before unqualified hospitals are closed. Since the Japanese army and navy were abolished, the military hospitals necessarily had to be converted into civilian hospitals. They were placed under the jurisdiction of the Ministry of Health and Welfare. At the time of writing, ninety-eight of these general hospitals are called National Hospitals and are still under the control of the ministry, the remainder having been assigned to prefectures, cities or private organizations.

As of May 1, 1949, there were 2,885 hospitals in Japan of 20 beds or more, with a total of 243,478 beds. Seven hundred and thirty-two of these hospitals, with 113,063 beds, are operated by city, state or national governments. The 98 national hospitals, with 19 branches, have a bed capacity of 28,118. Of these beds, 6,334 are devoted to the treatment of tuberculosis. In addition, there are 143 national tuberculosis sanatoriums, with a bed capacity of 33,001, which will be increased by an additional 13,000 beds during 1949. The ratio of beds in hospitals operated by cities, prefectures and national governments to total hospital beds is 49.7 per cent. There are 3.26 beds per 1,000 population.

Adequate medical supplies are now produced in Japan to meet requirements of all hospitals. New drugs have been made available and are being produced in Japan. Promin® (sodium p,p'-diaminodiphenylsulfone-N,N'-didextrose sulfonate) is being used in the ten leprosariums for the treatment of 7,988 leprous persons. Based on weekly reports of bed occupancy, at no time have more than 50 per cent of the available beds been in use since the beginning of the Occupation.

Hospital Administration.—Under the Japanese system of closed hospitals, the medical director is responsible not only for the housekeeping in the hospitals but for the caliber of professional care rendered by his staff. In actual practice, the director of the hospital usually is a specialist and devotes his interest to the practice of his specialty, delegating to a lay chief clerk the administration of the functions of the hospital.

In an effort to solve the maladministration problem, a model hospital has been established and a School of Hospital Administration was opened at this model hospital in September 1948. So far, 200 hospital administrators have received training at this school. As a second step in this program, similar model hospitals will be established in each of the 46 prefectures, at which similar courses will be conducted, in order that over the future years modern methods of hospital administration may be carried out throughout Japan.

Medical Literature.—Due to its self-isolation, the foreign medical literature available to the Japanese medical profession was limited. Steps have been taken to bring to the Japanese medical profession modern medical knowledge by making available texts and professional journals. The American Medical Association Mission, which visited Japan in 1948, has been of great assistance in supplying copies of journals and texts.

The Japan Medical Association.—The Japan Medical Association grew out of the Japanese Hygiene Association formed in 1882.

About 1936, it is claimed, pressure began to be exerted on the medical association by the militarist groups, until in February 1942 the "Medical Treatment Law" was passed, which law provided for the compulsory formation of medical associations in which membership became mandatory.

Election of officers ceased. Officers of the national association were appointed by the Cabinet on the recommendation of the Minister of Health and Welfare, and officers of prefectural associations were appointed on the recommendation of the prefectural governor.

This medical organization remained until its dissolution in 1947, when, with the guidance of the Supreme Command, a new judicial body was formed, with a constitution patterned after that of the American Medical Association. The first election of officers of the new association took place on March 1, 1948.

When health insurance plans began operating in 1927, after passage of the law in 1922, the Japan Medical Association made a contract with the government to furnish medical care under this program, the association receiving, under this contract, funds from the government for services rendered and paying its members their fees on a point system. In 1942 the next step was taken, in which the association became a governmental body for controlling the medical profession, subsidized by national funds. The fees of physicians and hospitals were then paid by the insurance agencies, the role of the association being limited to the review of the bills as to the validity of the fees requested.

Since reorganization of the Japan Medical Association in 1947 as a professional association representing the physicians, government subsidy has ceased. The Japan Medical Association is now publishing its journal for the first time, has a voluntary membership of 55,298 physicians, representing 90 per cent of all practicing physicians in Japan and 76 per cent of the total number of doctors in the country. There are forty-six prefecture associations and seven hundred and eighty-nine district, city and ward associations. This new organization, like the newly reorganized Japan Dental Association, the Nursing Association and the Pharmacists Association, needs continued assistance and guidance until it becomes sufficiently mature to stand on its own feet. Progress is being made.

WELFARE

It will not be possible within the scope of this paper to discuss the welfare programs, other than to mention that under the "Daily Life Security Law," a public assistance law now providing assistance to 1,600,000 persons, medical care costs of medically indigent are

paid for by grants-in-aid, 80 per cent national, 10 per cent prefectural and 10 per cent local.

A National Disaster Law was passed on Oct. 18, 1947, which sets up a nationwide disaster relief organization for formulating plans of operation and direction in the event of disaster and to expedite the flow of disaster supplies. Each prefecture is required to have disaster relief teams, composed of police, health officials, welfare officials, economic officials, firemen and engineers. The Japanese Red Cross, under the law, is now recognized as a quasigovernmental agency in times of disaster and is responsible for the coordination of all voluntary groups or agencies assisting the governmental agencies. Stocks of food, clothing and medical supplies are held at strategic locations for use in major disasters. This organization has worked well and efficiently in the numerous major disasters, such as earthquakes and floods, which have occurred with great regularity in Japan.

SOCIAL SECURITY

Under Social Security, there are two major programs concerned with medical care, the oldest of which has been in operation since 1927, following pasage of the law in 1922.

Health Insurance.—Established in 1922, the health insurance is an industrial insurance covering 5,100,000 workers and 11,700,000 dependents as of April 1, 1949. Contributions are 50 per cent by the employer and 50 per cent by the employee, to provide medical care benefits, maternity benefits and funeral expenses. Since the contributions are geared on a percentage basis to wages, this industrial health insurance is on a comparatively sound financial basis during this period of inflation.

National Health Insurance.—Established in 1938, national health insurance covers 32,000,000 nonindustrial persons, as of April 1, 1949. This is a voluntary insurance now made up of approximately six thousand five hundred local or village associations. Under this local option principle, any community may hold an election to determine whether or not it wishes to establish a health insurance association. If the majority vote for such an association, it becomes compulsory for the members of that community. Contributions are fixed locally within certain brackets. Medical care, maternity benefits and funeral expenses are paid. These associations are formed into a national federation. During the period of inflation following the termination of the war, about one third of the associations, being unable to pay benefits out of their reserves, because of the decreased purchasing power of the yen, suspended operations. Steps were taken by the national government to provide subsidies to partially bridge the gap between the value of the yen at the time premiums were paid and its lower purchasing power at the time benefits were paid. This subsidy is in addition to the former subsidy for paying part of the administrative costs. As a result, many of these associations which had been suspended have been reactivated by their members and are again in operation.

At the invitation of Gen. Douglas MacArthur, Supreme Commander for the Allied Powers, a representative group from the American Medical Association visited Japan to review the health insurance program. These members, Drs. Sensenich, Irons, Henderson, McCormick and Fitzgibbon, were of great assistance. Since their report has already been published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,[1] it will not be necessary to elaborate further on the health insurance program in Japan.

SUMMARY

Some progress has been made in preventing widespread disease and unrest in Japan. A sound organization has been established from the national to the local level, integrating the four fundamentals of preventive medicine, medical care, welfare and social security.

Major reforms and programs which have been undertaken in the fields of preventive medicine and medical care have been briefly outlined. An organizational framework, or blueprint, has been established in these fields. However, the largest part of the problem is still ahead. That problem is one of advice, guidance and training. In some of the professions it involves bridging a gap in professional knowledge of twenty to thirty years. Until such time as an adequate number of Japanese can be trained in modern knowledge in the fields of health and welfare for a nation of 80,000,000 people, continued assistance will be required. Japan looks to the professions of the United States for such assistance.

A. P. O. 500, San Francisco.

Clinical Notes, Suggestions and New Instruments

ARTERIOVENOUS ANEURYSM OF THE PHRENIC VESSELS

Report of a Case Following Thoracentesis

DANIEL C. ELKIN, M.D.
Emory University, Ga.

Previous reports have dealt with instances of aneurysm and arteriovenous fistula following surgical procedures.[1] This report concerns an arteriovenous fistula caused by injury of the phrenic vessels by a needle used for thoracentesis. Since to my knowledge there is no other case of this kind in the literature, it is reported because of its rarity and to point out the possibility of this injury from an accepted and frequently practiced surgical procedure.[2]

REPORT OF CASE

B. M. B., a woman physician aged 39, gave a history of pleural effusion at the age of 15, for which thoracentesis was performed. The needle was introduced on several occasions, always through the lower posterior portion of the right side of the chest. Tuberculosis was suspected but could not be proved bacteriologically; recovery after the withdrawal of fluid was rapid and uneventful. In 1927, in the course of a physical examination, a continuous bruit was heard over the ninth intercostal space in the posterior scapular line. At that time the patient was seen by Dr. Mont R. Reid on several occasions, and, since he believed that the intensity of the bruit was decreasing, he advised that no operation be performed.

1. Henderson, E. L.; Sensenich, R. L.; Irons, E. E.; Fitzgibbon, J. H., and McCormick, E. J.: Medicine in Japan, Organization Section, J. A. M. A. **139**:1277 (April 30) 1949.

From the Whitehead Department of Surgery, Emory University.

1. Elkin, D. C., and Bunner, E. A.: Arteriovenous Aneurysm Following Surgical Operations, J. A. M. A. **121**:1117 (Aug. 3) 1946. Elkin, D. C.: Aneurysm Following Surgical Procedures: Report of Five Cases, Ann. Surg. **127**:769 (May) 1948.

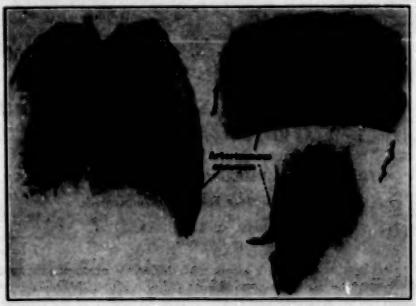
2. This case was previously reported (Reid, M. R., and McGuire, J.: Arteriovenous Aneurysms, Ann. Surg. **108**:643, 1938) as an arteriovenous aneurysm of the intercostal vessels. Because of the position of the bruit and because of the previous history this was the natural assumption, in which I agreed, but which proved to be incorrect at operation.

The patient continued active practice of pediatrics and had no symptoms of cardiac failure, but because of pain in the right lower part of the chest and in the region of the right shoulder, she sought further advice. There was nothing else contributory in her history except a thyroidectomy for nodular nontoxic goiter.

Examination on Dec. 16, 1948 showed her to be well developed and well nourished. There was a scar indicating the previous thyroidectomy. Her general physical condition was normal. The blood pressure was equal in both arms, 125 systolic and 80 diastolic. Examination of the heart showed no evidence of disease, and cardiac output determined by the ballistocardiograph was within normal limits, as was the blood volume. Roentgenograms showed no evidence of cardiac enlargement. Roentgenograms of the chest did not show rib erosion, although in the region of the ninth rib, posteriorly, there were small areas of calcification suggestive of phleboliths. There were a few areas of old fibrosis in the left lung, and the right portion of the diaphragm was slightly elevated.

In the posterior scapular line at the ninth rib, and limited to an area about 8 cm. in diameter, there was a harsh, continuous, machinery-like bruit, accentuated in systole. It could not be obliterated by pressure.

An operation was performed on Feb. 1, 1949. The anesthetic was intravenously administered thiopental sodium with intratracheally given nitrous oxide and ether. An incision 15 cm.



Diagrammatic representation of arteriovenous aneurysm of the right phrenic vessels, showing exposure by excision of a portion of the ninth rib.

long was made directly over the ninth rib posteriorly, and about 12 cm. of this rib was removed subperiosteally. Bleeding from numerous small vessels was increased. Firm pressure over the ninth intercostal bundle obliterated the bruit, and it was thought, therefore, that there was present an arteriovenous fistula of these vessels. Approximately 10 cm. of the ninth intercostal artery and vein were excised. This did not obliterate the bruit, and further exploration of the chest wall was continued through the pleura. Old adhesions had completely obliterated the costophrenic angle, and on continuing the dissection a network of dilated vessels (see figure) spreading over the diaphragm was found. Pressure on these vessels completely obliterated the bruit. A mass of arteries and veins communicating at a central point was completely excised, using ligatures of fine silk. After this was done, the bruit could no longer be heard with a sterile stethescope. The whole procedure was tedious because of the greatly increased number and size of the vessels in this region. The intercostal muscles, fascia and skin were closed, without drainage, with interrupted sutures of silk. At no time during the operation was the pleural cavity entered, and there was no evidence of collapse of the lung.

Except for ordinary postoperative pain, the recovery of the patient was uneventful, and she was able to leave the hospital after eight days. The bruit could not be heard at any time after the operation. On examination two months later, the patient had no complaints. The pain in the right side of her chest had completely disappeared, and the bruit could not be heard.

SUMMARY

A case of arteriovenous fistula of the phrenic vessels following thoracentesis is reported. The lesion was successfully excised. No other instance of a similar condition has been found in the literature.

URETHRAL OBSTRUCTION WITH OXIDIZED CELLULOSE FOLLOWING RETROPUBIC PROSTATECTOMY

LEANDER WILLIAM RIBA, M.D.
Chicago

Oxidized cellulose in gauzelike form (oxycel®) is finding increasing favor among urologic surgeons. Postoperative hemorrhage is minimized in nearly all the cases in which it is used in the prostatic cavity following prostatectomy. When gauze packs and "pressure rubber bags" are eliminated the postoperative morbidity is definitely shortened. With oxidized cellulose or absorbable gelatin sponge (gelfoam®) patients have infinitely less pain and discomfort. Sedatives are unnecessary unless the catheter fails to drain properly. After the catheter is removed the oxidized cellulose or the absorbable gelatin sponge usually disintegrates or the material can be irrigated out.

The purpose of this report is to call attention to the retention of oxidized cellulose in the posterior urethra following retropubic prostatectomy. The retained material caused posterior urethral obstruction and severe vesical symptoms.

REPORT OF CASE

Mr. E. S. J., aged 80, was admitted to the Passavant Memorial Hospital Dec. 27, 1948 complaining of inability to void for two days. He was catheterized twice prior to admission, and 800 and 1,000 cc. of urine were obtained. He denied urinary symptoms except nocturia one or two times. The past history was noncontributory. The physical examination revealed a fairly well preserved octogenarian who was unable to void. The bladder was distended 5 fingerbreadths above the symphysis. The prostate was decidedly enlarged (grade 3) and slightly indurated with obliteration of the median groove. Results of the blood cell and differential counts were within normal limits; the bleeding time was 6 minutes 15 seconds, the coagulation time 2 minutes. The blood pressure was 134 systolic and 78 diastolic. The blood urea nitrogen was 24.6 mg. and the blood sugar 129 mg. per hundred cubic centimeters. The urine was clear and showed 20 to 30 red blood cells per high power field and a 2 plus reaction for albumin. The phenolsulfonphthalein test resulted in excretion of 70 per cent of the dye in two hours. The Kahn and Wassermann serologic tests revealed a 4 plus reaction. A scout roentgenogram of the abdomen showed sclerosis of the left innominate bone. The roentgenogram of the chest revealed clear pulmonary fields and mild cardiac enlargement. The electrocardiogram disclosed no conduction defect.

The patient was treated with intramuscular injections of penicillin, 600,000 units daily for ten days. On Jan. 5, 1949 a prostatectomy was performed. With such a large prostate a retropubic approach was recommended. Through a low transverse incision the anterior prostatic capsule became accessible. The capsule was incised transversely, and the adenoma was easily removed (fig. 1). There was only moderate bleeding. A Foley catheter was inserted, and the balloon was distended to 30 cc. within the bladder cavity. Before the capsule was closed with 00 chromic surgical gut two strips of oxidized cellulose in gauzelike form were placed inside the prostatic capsule. The wound was closed in layers, and the postoperative course was uneventful until January 12. At this time the patient complained of exceptional frequency of urination, nocturia and dysuria. The urine was loaded with pus, and there were some red cells. Rectal examination revealed a doughy prostatic capsule. The man complained of a generalized pruritus, and penicillin therapy was discontinued. The urinary symptoms continued, and on January 24 the patient was taken back to the operating room. A 24 F cystoscope could be passed easily.

From the Department of Urology, Northwestern University Medical School; attending urologist, Passavant Memorial Hospital.

and examination showed pronounced cystitis and a large amount of black substance in the prostatic urethra. With a resectoscopic loop 45 cc. of this material was removed (fig. 2). Immature urethral mucosa was noted beneath the retained oxidized cellulose. Culture of the urine now showed infection due to Pseudomonas aeruginosa (pyocyanea), which responded

Fig. 1.—Large nodular benign hypertrophied prostatic adenoma removed by retropubic prostatectomy, weight 157 Gm.

to streptomycin therapy. The patient was discharged three days later in a greatly improved condition. Follow-up observations reveal satisfactory function of the bladder and clear urine.

COMMENT

This case is of interest because of the severe obstructive symptoms which developed in the patient one week after prostatectomy. As a rule when oxidized cellulose (oxycel*) or absorbable gelatin sponge (gelfoam*) is used postoperative complications do not follow. We have had 1 similar case following suprapubic prostatectomy and packing with absorbable gelatin sponge. In this patient the material was also removed with resectoscopic loop. The use of oxidized cellulose

Fig. 2.—Forty-five cubic centimeters of retained oxidized cellulose was removed transurethrally from the prostatic bed nineteen days after operation.

or absorbable gelatin sponge and a Foley catheter is exceedingly helpful in the first forty-eight hours following prostatectomy. The persistence of these hemostatic agents in the prostatic bed should be kept in mind. When such retention occurs the material can be removed with a resectoscope.

720 North Michigan Avenue.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

AUREOMYCIN HYDROCHLORIDE.—Aureomycin is an antibiotic produced by fermentation using the organism Streptomyces aureofaciens. It is used in the form of the hydrochloride

For tests and standards, see regulation under Sec. 507, Food, Drug and Cosmetic Act, copies of which are obtainable from the Division of Antibiotics, Food and Drug Administration, Washington, D. C.

Actions and Uses.—In vitro, aureomycin hydrochloride is effective against certain strains of beta hemolytic streptococci, nonhemolytic streptococci, group D; alpha hemolytic streptococci, pneumococci, staphylococci, Escherichia coli, Aerobacter aerogenes, Klebsiella pneumoniae, Bacillus subtilis and Corynebacterium hoffmanii. In embryonated eggs it has an effect against rickettsiae and certain large viruses.

Clinically, aureomycin hydrochloride has been reported to be effective in the treatment of Rocky Mountain spotted fever, typhus, scrub typhus, murine typhus, and Brills' disease in the rickettsial group; Q fever, primary atypical pneumonia, beta hemolytic streptococcic infections, urinary tract infections produced by E. coli, A. aerogenes, staphylococci or streptococci. It should not be used in cystemic infections produced by Proteus vulgaris or Pseudomonas aeruginosa. It may also be used in staphylococcic and pneumococcic infections, in acute brucellosis and in subacute bacterial endocarditis which does not respond to penicillin.

Aureomycin hydrochloride, suitably buffered, may be used locally in the eye against a variety of ocular viral infections, such as inclusion conjunctivitis, follicular conjunctivitis and ocular bacterial infections caused by susceptible organisms.

The drug produces nausea, vomiting and diarrhea in a fair number of patients.

Dosage.—Severe infections require 5 to 10 mg. per kilogram of body weight every four hours orally.

Mild infections can be treated with oral doses of 5 mg. per kilogram of body weight every four hours.

Solutions for ophthalmic use may be prepared by adding 5 cc. of sterile distilled water to 25 mg. of hydrochloride. One or 2 drops every 2 hours in the affected eye will usually suffice to control the condition.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID CO., PEARL RIVER, N. Y.

Capsules Aureomycin Hydrochloride: 50 mg. and 250 mg.

Aureomycin Hydrochloride: 50 mg. vial of crystalline material, each packaged with a 10 cc. vial of 0.75 per cent of sodium carbonate solution as a diluent for injection.

Aureomycin Hydrochloride: 25 mg. with sodium chloride 62.5 mg. and sodium borate 25 mg. in vials with dropper to be diluted with distilled water for ophthalmic use.

PENICILLIN FOR PARENTERAL USE FOR PROLONGED ACTION (See New and Nonofficial Remedies 1949, p. 153).

The following dosage forms have been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Crystalline Procaine Penicillin G (Micronized) in Oil: 300,000 units per cc., in sesame oil with aluminum monostearate 2 per cent, 10 cc. vials.

STRONG COBB & COMPANY, INC., CLEVELAND 4

Crystalline Procaine Penicillin G in Oil: 300,000 units per cc. in peanut oil with aluminum monostearate 2 per cent, 1 cc. ampins.[9]

THEOPHYLLINE-SODIUM GLYCINATE (See New and Nonofficial Remedies 1949, p. 330).

The following dosage form has been accepted:

FIRST TEXAS CHEMICAL MFG. CO., DALLAS, TEXAS

Tablets Glynasan: 0.162 Gm.

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SATURDAY, OCTOBER 22, 1949

GIANT CELL TUMOR OF BONE

The term "giant cell tumor" was first proposed by Bloodgood, who in 1919 reported 47 patients cured by curettage and bone grafting. The British investigators, according to Willis,[1] admit the propriety of this term but prefer the term osteoclastoma, because the cells which compose the tumor are osteoclastic rather than osteoblastic. Jaffe, Lichtenstein and Portis,[2] among more recent investigators, regard the giant cell tumor as a genuine neoplasm arising from the undifferentiated supporting connective tissue of the marrow. The tumor exhibits benign characteristics clinically and pathologically, but recurrence after treatment is not uncommon and the tumor may take on invasive qualities and metastasize. Histologically, the tumor is composed of a vascularized network of spindle-shaped or ovoid stromal cells and multinuclear giant cells. In about two thirds of the cases, these tumors develop before the age of 30, the greatest number occurring in the third decade. Men and women are about equally affected. About half the tumors develop in bones of the lower limb and one quarter in the upper limb; with few exceptions they occur at the ends of the bones. The remaining 25 per cent of tumors arise in bones of the head and trunk. Most American investigators believe that the tumor starts in the epiphysis or in the epiphyseal end of a long tubular bone. British investigators, according to Willis, believe that the tumor develops in the metaphysis and may later invade the epiphysis.

The diagnosis of the lesion is reached by roentgenographic study, drill biopsy or operative exposure and excision of several parts of the tumor. Jaffe and his co-workers have expressed the belief that the diagnostic value of the radiographic multilocular appearance of the tumor has been overstressed, since a similar appearance may be observed with angioma, solitary xanthogranuloma, enchondroma and various fibrous lesions of bone. The location of the area of bone rarefaction in the end of the bone and the thinning and expansion of the cortex are far more important diagnostically. The distended area is usually delimited by a thin shell of newly formed bone which has replaced the resorbed original cortex.

Treatment of giant cell tumor depends primarily on an accurate diagnosis. Whereas sarcoma of bone would require amputation of the limb, giant cell tumor can be treated conservatively. The surest method for reaching correct diagnosis, according to Lichtenstein, is a conservative but adequate surgical exposure and biopsy followed immediately by study of frozen sections. The tumor may be treated by excision, by curettement alone, by curettement followed by irradiation or by irradiation alone. Irradiation as an adjuvant to curettage may apparently stimulate recurrence or increase the aggressiveness of the lesion. The tendency is to treat the lesion either by curettement and bone filling or by irradiation alone. Prossor[3] stresses that recurrence after irradiation is unusual. The risk of hemorrhage, necrosis and sepsis is negligible. The only disadvantage is the time required for healing and consolidation of the bone, which may be as much as eighteen months. Windeyer and Woodyatt[4] treated "osteoclastoma" in 38 cases by curettage or local excision, with or without irradiation and with radiation alone. They believe that radiotherapy alone is the treatment of choice. Ellis treated osteoclastoma in 21 cases by irradiation and is inclined toward the same conclusion. The advantages of this treatment, as he sees it, are: it is curative, painless, free from complications and capable of being used without hospitalization of the patient. An obvious disadvantage lies in the fact that complete histologic study of the tumor tissue is not available. This, however, may be overcome by use of drill biopsy before treatment is begun. Other possible disadvantages are the possible extension of the lesion after treatment, malignant transformation and disturbance of epiphyseal growth.

1. Willis, R. A.: The Pathology of Osteoclastoma or Giant-Cell Tumour of Bone, J. Bone & Joint Surg. 31:236-240 (May) 1949.
2. Jaffe, H. L.; Lichtenstein, L., and Portis, R. B.: Giant Cell Tumor of Bone: Its Pathologic Appearance, Grading, Supposed Variants and Treatment, Arch. Path. 30:993-1031 (Nov.) 1940.
3. Prossor, T. M.: Treatment of Giant-Cell Tumours of Bone with a Review of Twenty-Five Cases, J. Bone & Joint Surg. 31:241-251 (May) 1949.
4. Windeyer, B. W., and Woodyatt, P. B.: Osteoclastoma: A Study of Thirty-Eight Cases, J. Bone & Joint Surg. 31:252-267 (May) 1949.

METHEMOGLOBINEMIA IN INFANTS

Severe poisoning caused by ingestion of wax crayons, although rare, demonstrates that finished dyes, insoluble in vitro, under certain conditions may become soluble in the body. After eating red, orange or yellow crayons, infants experienced acute, severe methemoglobinemia. Schwartz and Rector[1] reported in 1940 a case of acute "idiopathic" methemoglobinemia in a 2 week old infant; prompt disappearance of cyanosis followed administra-

1. Schwartz, A. S., and Rector, E. J.: Methemoglobinemia of Unknown Origin in a Two Week Old Infant, Am. J. Dis. Child. 60:652 (Sept.) 1940.

tion of methylthionine chloride (methylene blue). Comly,[2] in 1945, observed that nitrates in well water caused methemoglobinemia in infants. Infants with gastrointestinal disturbances who received boiled water from poorly constructed farmyard wells experienced deep cyanosis. The water in such wells may contain large amounts of nitrates, which when ingested are converted by bacterial action to nitrites. The nitrite ion is absorbed and oxidizes hemoglobin to methemoglobin. The intravenous administration of methylene blue in the dosage of 1 to 2 mg. for each kilogram of body weight promptly relieved the cyanosis and distress.

Johnson and his co-workers [3] of Iowa State Department of Health examined the water of many rural wells for the nitrate content and found that the water in several contained nitrate nitrogen in amounts sufficient to produce cyanosis in infants. The location and condition of wells in rural districts are such as to permit the contamination of water by seepage from barnyards and other sources rich in nitrogenous matter.

Ferrant [4] reported 2 cases of methemoglobinemia in infants as a result of the use of well water containing excessive amounts of nitrates. Well water was used for the dilution of powdered milk in the formula.

The anoxemia which results from the high level of methemoglobin in the blood explains the shock, dyspnea, tachycardia and prostration. The methemoglobin level in the blood may be above 50 per cent of the total pigment. Faucett and Miller [5] report 3 cases of proved methemoglobinemia in infants caused by ingestion of water with a high concentration of nitrate ion. Two of the babies were treated with methylene blue, and both responded promptly, the first within thirty minutes and the second within twenty minutes. Methemoglobinemia in newborn infants, these authors warn, may also result from absorption of aniline dye from newly stamped and unlaundered diapers.

Why methylene blue should be effective in the treatment of methemoglobinemia has not been explained. Methylene blue has the property of transforming in vitro hemoglobin into methemoglobin. Methylene blue itself is transformed into the leuco form, which in turn reacts with oxygen and forms again methylene blue. The administration of a methemoglobin-forming agent to patients suffering from methemoglobinemia would seem illogical, but clinical experience demonstrates that methylene blue does act as a specific in the treatment of this condition.

2. Comly, H. H.: Cyanosis in Infants Caused by Nitrates in Well Water, J. A. M. A. 129:112 (Sept. 8) 1945.

3. Johnson, G.; Kurz, A.; Cerny, J.; Anderson, A., and Matlack, G.: Nitrate Levels in Water from Rural Iowa Wells: A Preliminary Report, J. Iowa M. Soc., 36:4 (Jan.) 1946.

4. Ferrant, M.: Methemoglobinemia: Two Cases in Newborn Infants Caused by Nitrates in Well Water, J. Pediat. 29:585 (Nov.) 1946.

5. Faucett, R. L., and Miller, H. C.: Methemoglobinemia Occurring in Infants Fed Milk Diluted with Well Water of High Nitrate Content, J. Pediat. 29:593 (Nov.) 1946.

MAN'S CAPACITY FOR ALCOHOL

The use of alcoholic drinks, like other social customs, has its traditions. The eighteenth century in Britain, for example, was the era of the so-called three-bottle men; indeed, the accounts of not only the drinking but also the eating customs among certain social classes in that period remind one of modern descriptions of a Russian banquet. During that era of gargantuan meals gentlemen, at the close of a dinner, imbibed the contents of three bottles, presumably fifths, of port wine. At the end of this performance, which had been preceded by the usual dinner wines, some of the gentlemen were under the table, which, since port is habitually fortified with more alcohol than is produced by natural fermentation, is not surprising. Furthermore, this amount was consumed in a short period. In the eighteenth century, too, Peter the Great of Russia, a man of almost gigantic proportions, started his stag dinners by requiring each guest to empty at one gulp a silver flagon filled with vodka. This flagon still stands on the table in the little dining room where he entertained his intimate friends and must have a capacity of at least a pint. Today a common form of entertainment is the cocktail party; while some such parties may be almost decorous, others degenerate into debauches.

For years physicians concerned with patients suffering from chronic alcoholism have been attempting to elicit at least an approximate estimate of the daily consumption of liquor. Many medical historians have used such vague terms as "alcohol in moderation." A record giving the consumption of alcohol in variety and drinks per day is not accurate, for the size of a drink may vary. Whisky, perhaps the most popular of the ardent spirits, varies in the percentage of alcohol which it contains. Even if the drinker buys by the bottle and estimates his consumption in bottles per diem, this variation in alcohol content prevails. The situation is further confused by the fact that many chronically alcoholic persons are members of the Ananias Club.

Alcoholic persons are more likely to underestimate than to overestimate their consumption. The recent work of Newman [1] suggests that some deliberately overestimate their alcoholic ration, probably from pure braggadocio. Newman's researches indicate that a man weighing 70 Kg. can metabolize about 26½ ounces (751 Gm.) of 100 proof whisky in twenty-four hours. Any definite increase in this amount would raise the alcohol content of the blood and brain to a point where coma would supervene. This limit could be exceeded only for a brief period, probably a matter of hours. Anyone on a daily ration of a quart of whisky of this potency would show obvious signs of intoxication. Furthermore, the idea that habituation produces increased facility in metabolization is not supported by scientific evidence. Large and heavy persons can con-

1. Newman, H. W.: Science 100:104 (June 10) 1949.

sume somewhat more, but merely on account of their bulk and not because of any increase in ability to metabolize alcohol. Newman provides, for the first time, an accurate standard of human capacity for the consumption of alcohol.

Current Comment

SURVEY OF BLOOD BANK RESOURCES

The Committee on Blood Banks which was established by the House of Delegates has undertaken a study to evaluate the blood bank resources throughout the country. During the second week of October the Committee mailed questionnaires to more than 1,500 blood banks and about 5,100 hospitals without blood banks. A letter accompanying each questionnaire stressed the importance of blood banks in modern methods of medical care and the need for a comprehensive and accurate study of blood bank facilities. This questionnaire is the first step in determining the capacity, equipment, personnel, inventory, general processing procedures and arrangements for emergency cooperation among blood banks. Because information concerning blood utilization by hospitals is needed to supplement the data requested from blood banks, the Committee mailed questionnaires printed in blue to hospitals without blood banks and in black to blood banks and Red Cross blood centers. Questions concerning many technical aspects of blood bank operation could not be included. The principal purposes of the questionnaire are to determine where and how much blood is being used annually and to present a general picture of the operations of blood centers and blood banks in obtaining and distributing the blood. In the background is the question of the role of blood banks in a national emergency. The success of the survey depends on the cooperation of those receiving the questionnaires. The Committee will appreciate complete and prompt replies.

SYMPOSIUM ON HIGH ALTITUDE BIOLOGY

An International Symposium on High Altitude Biology will be held in Lima, Peru, Nov. 21-30, 1949, under the auspices of UNESCO and the Government of Peru. A considerable part of the population of Peru lives on the elevated slopes of the Andes and in its large plateaus. Approximately 5,000,000 persons live at altitudes over 10,000 feet, and there are several towns at 14,000 feet and higher. The anoxia, which is the result of low oxygen tension in the inspired air, produces definite physiologic characteristics, but there also occurs a surprising degree of tolerance. These characteristics have been studied in the past by members of several international high altitude expeditions and by Peruvian investigators during the past two decades. The Faculty of Medicine of the University of San Marcos, Lima, Peru, organized the Institute of Andean Biology in 1931. The institute was aided by the Rockefeller Foundation, which has supplied training to most of the members and equipment. A permanent laboratory was established in Huancayo, at 11,000 feet of altitude, while another laboratory is to be erected in Morococha, a mining town at 14,540 feet. An annex of this laboratory operates at an altitude of 16,600 feet. Comparative studies are carried out in research laboratories of the Department of Pathological Physiology, Faculty of Medicine, Lima, at sea level. Men living permanently at high altitudes have been studied at rest and during physical activity. The findings have been compared with those made at sea level. The clinical and pathologic aspects associated with loss of adaptation and the problem of fertility in animals found in high places were the special subjects of investigations. Observations also have been made on newcomers at high altitudes and on men returning to sea level after a prolonged residence at high altitudes. These and other problems are to be discussed at the forthcoming symposium.

INTERSCAPULAR HIBERNOMA

The interscapular, or so-called hibernating, gland is one of the best known primitive fat organs. In man it probably is the homologue of the hibernating gland of rodents. The gland is a paired organ and extends over a considerable area in the region of the shoulders and the sides of the neck. Its fat tissues are abundantly vascularized by capillary blood vessels. In certain lower animals that part of the gland which is provided with polygonal fat-laden cells is believed by some to serve as a source of food supply during the period of hibernation. Shattock [1] states, "During hibernation these reserves are used up and dwindle away, a residuum of connective tissue alone remaining, to be again replaced before the arrival of the next hibernating season." Others have expressed the belief that the fat in these localities is not disturbed either during hibernation or starvation. However, the cells obviously are primarily for the storage of fat. The designation hibernoma, which is applied to certain tumors of primitive fat organs, is inappropriate but is sanctioned by usage. In 1905 Merkle described a tumor which arose, he thought, from the cells of a sebaceous gland rather than from those of a primitive fat organ. Since then, according to Brines and Johnson,[2] reports of 9 probably authentic cases of hibernoma have appeared in the medical literature. These observers have added another. Inglis [3] described a solid tumor derived from the fat cells of the interscapular gland. The growth was composed of foam cells in the cytoplasm of which sudan III revealed innumerable fat particles. His case and the one recorded by Brines and Johnson are believed to be the only recorded cases of solid growths originating in primitive fat organs. Both were composed of sudanophilic fat cells of the embryonal type. In the solid growth described by Symmers [4] some of the cells were filled with fat, but the origin of the tumor was doubtful.

1. Shattock, S. G.: On Normal Tumour-Like Formations of Fat in Man and the Lower Animals, Proc. Roy. Soc. Med. (path. sect.) 2:207, 1908-1909.

2. Brines, O. A., and Johnson, M. H.: Hibernoma: A Special Fatty Tumor, Am. J. Path. 25:467, 1949.

3. Inglis, K.: The So-Called Interscapular Gland and Tumours Arising Therein, J. Anat. 61:452, 1926-1927.

4. Symmers, D.: Spindle and Giant Cell Sarcoma Arising from Unidentified Precordial Bodies, Arch. Path. 37:180, 1944.

ORGANIZATION SECTION

Official Notes

ABSTRACT OF MINUTES OF MEETINGS OF BOARD OF TRUSTEES HELD SEPTEMBER 23-24

The Executive Committee of the Board of Trustees held a two day meeting on September 21 and 22, which was followed by a two day meeting of the Board of Trustees. Space does not permit a full report of the meetings. Here, however, are mentioned those actions which are of more or less general interest.

Both the Executive Committee and the Board of Trustees gave most careful consideration to the budgets submitted by the various councils, bureaus, departments and committees and made drastic reductions in some of them with a view to bringing the total amount of the requests made into line with the anticipated income of the Association for the year 1950. In addition, however, the Board found it necessary to make a 10 per cent reduction in all budgets, with the understanding that if any of the councils, bureaus, departments or committees are unable to carry on their work with the reduced budget they may appeal to the Board of Trustees for further consideration. The principal reason for that action is that some budgets consist only of salaries and the salary item cannot be reduced without discharging employees who at present seem to be essential.

Appointments

Archives of Ophthalmology.—Additional members on Editorial Board: Dr. Jonas S. Friedenwald, Dr. Kenneth C. Swan and Dr. John Dunnington.

Council on Pharmacy and Chemistry.—Dr. George W. Thorn, Dr. Windsor C. Cutting and Dr. Henry K. Beecher to succeed Drs. David Barr, Edward Churchill and W. Barry Wood Jr., respectively.

Advisory Committee to Cooperative Medical Advertising Bureau.—Dr. Stanley B. Weld to succeed himself.

Archives of Pathology.—Dr. Granville A. Bennett to succeed Dr. Ludvig Hektoen (resigned) as Chief Editor.

Council on Industrial Health.—Dr. Stanley H. Osborn, Prof. Philip Drinker, Dr. James G. Townsend and Dr. Alfred H. Whittaker, ex officio members.

Consulting Committees.—The Board, acting on the action of the House of Delegates and on the recommendation of the Council on Industrial Health, approved the addition to the Council of consultants in environmental hygiene and sanitation, to include experts in the several fields of atmospheric pollution and harmful physical, chemical and biologic agents having industrial uses, and on human relations in business and industry, to include qualified experts in psychiatry, industrial psychology, sociology and personnel relations.

Co-Chairmen of Local Committee on Arrangements for San Francisco Session

The nomination by the San Francisco County Medical Society of Dr. John W. Cline and Robertson Ward as co-chairmen of the Local Committee on Arrangements for the San Francisco Session of the Association was confirmed by the Board of Trustees.

Appointment of Representatives

Dr. E. J. McCormick was appointed to represent the American Medical Association at the inauguration of the president of Marietta College; Dr. W. B. Martin, at the installation of Dr. Arthur Hollis Edens as president of Duke University; Dr. L. H. Bauer, with Dr. E. B. Howard and Dr. James R. Miller, on the National Health Council, and Dr. E. L. Henderson, at the meeting of the World Medical Association in place of Dr. W. F. Braasch, who was unable to accept the appointment.

Liaison Committee to National Association of Science Writers

Drs. Austin Smith, L. A. Buie and Percy Hopkins were appointed a liaison committee to the National Association of Science Writers, with Mr. L. Rember and Mr. John Bach who will serve as ex officio members.

Resolutions on Hill and Taft Bills

The Board, on motion duly seconded and carried, voted to approve the recommendation of the Executive Committee that the Board report to the House of Delegates that the resolutions on the Hill and Taft bills, which request that the Board hold hearings on the resolutions at which any interested person may appear to present his views, have been carefully considered and that it feels that it is not the province of the Board to hold hearings. The Board also voted that a notice be printed in THE JOURNAL to the effect that any member desirous of testifying regarding these bills should contact the National Liaison Committee, appointed at this meeting to confer with Congress.

Complimentary Subscriptions for Japan and Mexico

Authorization was given to send the Japan Medical Association one copy of each of the journals published by the Association for a period of one year, at the end of which time the matter will again receive consideration. Authorization was also given for including in the shipment any surplus stock of old magazines on hand, as well as a copy of New and Nonofficial Remedies, the History of the American Medical Association and any other books which it is deemed may be of interest to the Japan medical group.

It was also decided to send a complimentary subscription to THE JOURNAL to Dr. Ignacio Chavez, honorary president of the Sociedad Interamericana de Cardiologia, Mexico.

Council on Physical Medicine and Rehabilitation

A change in the name of the Council on Physical Medicine by the addition of the word Rehabilitation was approved by the Board.

Public Health Exhibit

Authorization was given to participate in the Public Health Exhibit in connection with the Scientific Assembly of the Medical Society of the District of Columbia, and funds to defray the expense were appropriated.

German Edition of Hygeia

Permission was granted to Hippokrates-Verlag Marquardt & Cie, Stuttgart, for the publication of a German edition of *Hygeia*, with the understanding that if the periodical is not one of good standing permission will be withdrawn.

Twelve Point Program

Authorization was given to the Bureau of Public Relations for the reprinting and distribution of 10,000 copies of the Twelve Point Program of the Association.

Cooperation with CARE

After hearing a report of the dissertation made by the Director of the Educational Unit of CARE to the Executive Committee in regard to the proposal to furnish books and magazines to universities and libraries of foreign countries, the Board voted that the Association advertise CARE through all the mediums available.

Appointment of New Committees

In accordance with resolutions introduced into the House of Delegates at the Atlantic City Session, the following committees were appointed:

Committee on General Practice, to consider further the problems of medical practice:

Dr. Stanley R. Truman, Oakland, Calif., Chairman.
Dr. Paul A. Davis, Akron, Ohio.
Dr. William L. Pressly, Due West, S. C.
Dr. George S. Klump, Williamsport, Pa.
Dr. Joseph B. Copeland, San Antonio, Texas.

Committee to Confer with Congress (National Liaison Committee) with a view to developing legislation that will meet the objectives of the American Medical Association program in its effort to solve the problem of making medical care more accessible to the American people:

Dr. Harvey B. Stone, Chairman.
Dr. R. L. Sensenich.
Dr. Louis H. Bauer.
Dr. R. B. Robins.
Dr. John W. Cline.
Dr. Frank Lahey.
Dr. Frank F. Borzell.
Dr. James R. McVay.
Dr. G. F. Lull } ex officio
Dr. E. L. Henderson }

Committee on Displaced Physicians, to study the problems of displaced physicians generally and as far as possible to cooperate with the International Refugee Organization and the various state authorities in furthering the resettlement of these persons in a spirit of friendly cooperation with unfortunate colleagues:

Dr. J. J. Moore, Chicago, Chairman.
Dr. Creighton Barker, New Haven.
Dr. Alex M. Burgess, Providence, R. I.
Dr. Jacob J. Golub, New York.
Dr. E. B. Howard, Chicago.
Dr. G. F. Lull, Chicago.

Investments

As is customary, the Finance Committee and the Board deliberated on the investments of the Association; that is, on the purchase and sale of bonds and on the recommendations of Standard & Poor's Corporation, which acts as the Association's advisers on investments.

Discontinuation of Committee on Scientific Research

The Board decided to discontinue the Committee on Scientific Research, inasmuch as there are many foundations now making large grants for research which duplicate essentially the work of this Committee.

Appropriations for other research were approved by the Board.

Commission on Chronic Illness

A report of progress was received from the Chairman of the Commission on Chronic Illness, and the Board appropriated funds for the employment of a director and made space available in the headquarters of the Association for the personnel to carry on the work of this Commission.

General Practitioner's Award

The Board voted that presentation of the General Practitioner's Award be made in the House of Delegates at the conclusion of the Tuesday Session and that it be followed by a social hour.

National Conference of County Medical Society Officers

The date set for the National Conference of County Medical Society Officers (Grass Roots Conference) is Thursday night, December 8, at the Statler Hotel, Washington, D. C.

Reports from Representatives

Reports were received from: Dr. H. R. Viets on his attendance at the meeting of the Interim Coordinating Committee on Medical and Biological Abstracting of UNESCO, held in Paris, June 1-4, 1949; Major General Guy B. Denit on his attendance at the meeting of the British Medical Association at Harrogate, June 24 to July 1; Dr. E. B. Howard on his attendance at the conference called by the National Sanitation Foundation at the School of Public Health of the University of Michigan and Dr. W. W. Bauer, who went to Germany at the request of the Office of Military Government for Germany (U. S.) to help survey the present German situation and to assist in the development of a modern progressive program in public health education in the United States zone and also for policy guidance in the formation of a central German public health organization for the projected Western German State.

PIECEMEAL SOCIALIZATION OF MEDICINE

Letter to the Secretary of the American Medical Association

Dear Dr. Lull:

The American College of Radiology views with alarm and dismay all proposed programs relating to the distribution of medical services which place the diagnostic aspects of medicine in a category apart from the general practice of medicine.

The convening of the 81st Congress brought forth a number of legislative programs so worded. Examples are: S. 5, the original Wagner-Murray-Dingell bill; S. 1679, the Thomas-Murray-Dingell bill; S. 1106, the Lodge bill; S. 1456, the Hill bill, and S. 1907, the Flanders-Ives bill. The treatment of diagnostic medicine under these legislative schemes has varied all the way from pinpoint socialization under S. 1106 and classification as a hospital service in S. 1907 to socialization in common with all of medicine but under the separate category of "auxiliary services" in S. 5 and S. 1679.

In addition to this legislation, not a few prominent members of the medical profession have recently promulgated similar plans emphasizing a difference in what they have termed "the practice of the diagnostic specialties" and the practice of medicine. The American College of Radiology is most disturbed by these medical spokesmen in that they have apparently seen in the socialization of diagnostic medicine relief from demands for socialization of all medicine. Theirs is a tragic error. The medical profession and most of the rest of the nation has come to understand that medicine cannot and will not be socialized in a vacuum. The socialization of any group, or segment of a group, is but a precursor of things to come. Medicine must not weaken its stand for freedom by partial appeasement and thus fall victim to piecemeal socialization. Abraham Lincoln observed, "No nation can long endure half slave and half free." It should be even more obvious that no profession can permanently maintain this imbalance.

It would be appreciated if you would bring this statement on the part of the American College of Radiology to the attention of all members of your group.

WILLIAM C. STRONACH,
Executive Secretary.

Washington Letter

(From a Special Correspondent)

Oct. 17, 1949.

Donora "Smog" Report Fails to Solve Mystery of Deaths

At a press conference on October 13, Federal Security Administrator Oscar R. Ewing released a 173 page printed technical report on the Donora (Pa.) "smog" disaster of October 1948, which claimed 20 lives. The report is based on an intensive study conducted on the scene by Public Health Service (Division of Industrial Hygiene), with the cooperation of the Bureau of Mines, Weather Bureau and other federal agencies.

The report, which is procurable ($1.25) from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., discloses these facts:

A total of 5,910 persons, 43 per cent of the Donora population, were affected to greater or lesser degree by the contaminant. The principal effect was irritation of the respiratory tract, with cough as the predominant single symptom.

A direct relationship of incidence and severity with increasing age was noted. Ages of persons who died ranged from 52 to 84 years, with a mean of 65 years, and 60 per cent of the inhabitants in the 65 or over group reported they were affected.

"While no single substance was responsible for the October 1948 episode, the syndrome could have been produced by a combination, or summation of the action, of two or more of the contaminants," says the report. "Sulfur dioxide and its oxidation products, together with particulate matter, are considered significant contaminants. However, the significance of the other irritants as important adjuvants to the biological effects cannot be finally estimated on the basis of present knowledge."

Recommendations dealt mainly with reduction of chemical fumes and particulate matter from industrial plants and establishment of a weather forecasting system to alert the community of impending atmospheric conditions conducive to "smog" danger.

Senate Health Subcommittee to Continue Investigation

The subcommittee on health legislation of the Senate Labor and Public Welfare Committee will "continue its study of the health problems of the nation and of legislative proposals relating thereto," under provisions of a Senate resolution which authorizes $10,000 for this purpose. Both the subcommittee and its parent committee have cleaned their calendars of all major health bills referred to them in 1949—with the notable exception of compulsory health insurance—but the $10,000 authorization was requested in the event the Murray subcommittee elects to obtain new data during the winter months. According to reports, it will attempt to gather new information on voluntary prepayment medical and hospital care plans, with the view of using such material in connection with hearings on health legislation in the second session of the 81st Congress.

Aid to Medical Education Passed Over Until 1950

Inauguration of a new federal program for financial support of medical schools and provision of scholarships has been passed over by Congress until 1950, as the result of failure of the House Rules Committee to grant a rule permitting a floor vote on the bill (H.R. 5940 and S. 1453) in the closing days of the session. The committee held a hearing on the measure October 13, two days after H.R. 5940 had been reported favorably by the House Interstate and Foreign Commerce Committee. The bill was "passed over" without prejudice without a vote being taken, thus ending chances of floor consideration before adjournment of the first session of the 81st Congress.

In acting favorably on H.R. 5940, which is identical to the Senate bill (S. 1453), the Interstate and Foreign Commerce Committee made only one change: Schools of optometry were added and optometric scholarships provided on the same basis as medicine, dentistry, nursing, public health and dental hygiene.

Pigeonholing the prospective legislation by the Rules Committee was attributed to (1) tardiness of the forwarding action taken by the Insterstate and Foreign Commerce Committee, which had had the program under consideration for several months, and (2) pressure exerted by certain nursing groups in North Carolina and Georgia who objected to accrediting procedures.

6,500 Physicians Participating in U.M.W.A. Medical Program

There are now 6,500 physicians and 600 hospitals participating in the medical program of the Welfare and Retirement Fund, United Mine Workers of America, according to latest figures. Between January 1 and September 1 of this year, 39,000 persons were hospitalized and 375,000 patient-days of hospital care provided.

Dr. Warren F. Draper, program director, expressed gratification at the reaction of participating physicians to suspension of payments from the United Mine Workers of America fund. The suspension order was issued September 17 and four weeks later letters were still being received from physicians, said Dr. Draper, advising him of their willingness to continue to accept miner patients even though there was no assurance that bills would be paid.

Coming Medical Meetings

American Medical Association Clinical Session, Washington, D. C., December 6-9. Dr. George F. Lull, 535 N. Dearborn, St., Chicago, Secretary.

Annual Conference of State Secretaries and Editors, Chicago, A. M. A. Building, Nov. 3-4. Dr. George F. Lull, 535 N. Dearborn St., Chicago 10, Secretary.

Ambulatory Fracture Association, Toronto, Canada, Royal York Hotel, Oct. 24-27. Dr. H. W. Wellmerling, 120 S. LaSalle St., Chicago 3, Secretary.

American Academy of Pediatrics, San Francisco, Nov. 14-17. Dr. Clifford G. Grulee, 636 Church St., Evanston, Ill., Secretary.

American Clinical and Climatological Association, White Sulphur Springs, W. Va., The Greenbrier, Oct. 27-29. Dr. James Bordley III, Bassett Hospital, Cooperstown, N. Y., Secretary.

American Medical Women's Association. Midyear Meeting, Tucson, Ariz., Nov. 10-11. Dr. Grace Talbott, 49 W. 49th St., New York 20, Corresponding Secretary.

American Public Health Association, New York, Oct. 24-28. Dr. Reginald M. Atwater, 1790 Broadway, New York 19, Executive Secretary.

American Society for the Study of Arteriosclerosis, Chicago, Hotel Knickerbocker, Nov. 5-7. Dr. O. J. Pollak, Quincy City Hospital, Quincy 69, Mass., Secretary.

American Society of Anesthesiologists, New York, Hotel New Yorker, Dec. 7-10. Dr. Curtiss B. Hickcox, 188 W. Randolph St., Chicago 1, Secretary.

American Society of Tropical Medicine, Memphis, Tenn., Nov. 6-9. Dr. Frederick J. Brady, National Institute of Health, Bethesda 14, Md., Secretary.

Association of Military Surgeons of the United States, Washington, D. C., Nov. 10-12. Col. James M. Phalen, Army Institute of Pathology, Washington 25, D. C., Secretary.

Central Society for Clinical Research, Chicago, Drake Hotel, Nov. 4-5. Dr. Kenneth G. Kohlstaedt, 960 Locke St., Indianapolis 7, Secretary.

Conference of State and Provincial Health Authorities of North America, New York, Oct. 28. Dr. Russell O. Sazvik, State Health Officer, Bismarck, N. D., Secretary.

International College of Surgeons, United States Chapter, Atlantic City, Haddon Hall, Nov. 7-12. Dr. Arnold S. Jackson, 1516 Lake Shore Drive, Chicago 10, Secretary.

Inter-State Post Graduate Medical Association of North America (International Medical Assembly), Philadelphia, Oct. 31-Nov. 3. Dr. Tom B. Throckmorton, Equitable Bldg., Des Moines, Iowa, Secretary.

National Gastroenterological Association, Boston, Hotel Somerset, Oct. 24-26. Dr. Sigurd W. Johnsen, 1818 Broadway, New York 23, Secretary.

Neurosurgical Society of America, Quebec, Canada, Chateau Frontenac, Oct. 30-Nov. 1. Dr. Edward Schlesinger, 710 W. 168th St., New York, Secretary.

Oklahoma City Clinical Society, Oklahoma City, Biltmore Hotel, Oct. 24-27. Dr. F. Maxey Cooper, 512 Medical Arts Bldg., Oklahoma City, Director of Clinics.

Post Graduate Medical Assembly of South Texas, Houston, Nov. 29-Dec. 1. Dr. E. Trowbridge Wolf, 229 Medical Arts Bldg., Houston, Secretary.

Puerto Rico, Medical Association of, San Juan, Dec. 14-18. Dr. Juan Basora-Defillo, 1459 America St., Santurce, Secretary.

Radiological Society of North America, Cleveland, Dec. 4-9. Dr. Donald S. Childs, 713 E. Genesee St., Syracuse 2, N. Y., Secretary.

Southern Medical Association, Cincinnati, Nov. 14-17. Mr. C. P. Loranz, Empire Building, Birmingham, Ala., Secretary.

Southern Psychiatric Association, New Orleans, Nov. 27-29. Dr. Newdigate M. Owensby, 384 Peachtree St., N.E., Atlanta, Georgia, Secretary.

Southern Society of Electroencephalography, New Orleans, Nov. 30. Dr. Samuel C. Little, 2111 Highland Ave., Birmingham 5, Ala., Secretary.

Southern Surgical Association, Hot Springs, Va., The Homestead, Dec. 6-8. Dr. John C. Burch, 2112 West End Ave., Nashville 5, Tenn., Secretary.

Southwestern Medical Association, Albuquerque, New Mexico, Nov. 9-12. Dr. Wickliffe R. Curtis, First National Bank Bldg., El Paso, Texas, Secretary.

Western Surgical Association, Santa Barbara, Calif., Nov. 29-Dec. 3. Dr. Warren H. Cole, 1853 W. Polk St., Chicago 12, Secretary.

GOVERNMENT SERVICES

ARMY

WORLD WAR II HISTORIES OF MEDICAL UNITS

The Army Medical Library, Washington, D. C., is attempting to collect official and unofficial histories of medical units in the second world war. Frequently these works were in the nature of memorial or souvenir volumes written by the men of the unit, printed by a local printer in Germany, France, the Philippines or wherever the unit was at the close of the war and financed from the unit mess fund. Generally they were distributed only within the unit. Because of these unusual circumstances of publication, the books are most elusive. However, they are important historical records of the Medical Department and copies should be in the Army Medical Library where they will be catalogued and preserved. Information about such histories, or better yet the books themselves, will be most welcome.

169 CIVILIAN INTERNS COMMISSIONED

Commissions as first lieutenants in the Medical Corps Reserve have been given to 169 medical graduates who have been accepted for internship training in approved civilian hospitals, Major General Bliss, the Surgeon General, has announced. They have been called to active duty, with full pay and allowances of their grade, and will remain in the civilian hospitals for the completion of their internship.

With this group the Army Medical Department inaugurates the second year of civilian intern training under its Graduate Professional Training Program. Under the provisions of the Civilian Intern Training Program, a medical school graduate who has been accepted for internship by a civilian hospital approved by the Council on Hospitals and Medical Education of the American Medical Association may apply for a commission as first lieutenant in the Medical Corps Reserve. If accepted, he is called to duty and assigned in a training status at the civilian hospital of his choice. On completion of his internship, he serves two years for each year of training he has received as a Reserve officer. Another phase of the Graduate Professional Training Program is military intern training, in which selected medical graduates complete their internship in one of ten Army general hospitals approved for medical teaching.

Applications for either phase are invited from prospective graduates who will be not less than 21 nor more than 32 years old on the date their internship will begin, who are citizens of the United States with high moral character and who meet the physical requirements for a commission in the Regular Army.

Information can be had from any Army recruiting office or from The Chief, Personnel Division, Office of the Surgeon General, Department of the Army, Washington 25, D. C.

ADVANCED TRAINING IN CIVILIAN INSTITUTIONS

The following additional Medical Department officers have been accepted for advanced training in civilian institutions:

Col. Otto L. Churney, National Gastroenterological Association, New York, gastrointestinal surgery.

Col. Earl Maxwell, University of California Medical School, San Francisco, ophthalmology.

Col. Charles J. Farinacci, American Society of Clinical Pathologists, Indianapolis, pathology of infants.

Col. Herbert T. Berwald, University of Michigan, Ann Arbor, clinical exercises for practitioners.

Lieut. Col. Carl J. Lind Jr., American Society of Clinical Pathologists, Indianapolis, pathology of infants.

Lieut. Col. Albert E. Montgomery, University of Michigan, University Hospital, Ann Arbor, electrocardiographic diagnosis.

Lieut. Col. Emmett L. Kehoe, New York University, Post Graduate Medical School, New York, tropical medicine.

Lieut. Col. John W. Rankston, New York University, Post Graduate Medical School, New York, tropical medicine.

Major Arthur Steer, American Society of Clinical Pathologists, Indianapolis, pathology of infants.

Major Lorenze E. Zimmerman, American Society of Clinical Pathologists, Indianapolis, pathology of infants.

Major Charles W. Moulten, Wayne University, Detroit, obstetrics and gynecology.

Capt. James B. Hartney, American Society of Clinical Pathologists, Indianapolis, pathology of infants.

Capt. Ralph E. Brown Jr., Rhode Island Hospital, Providence, surgery.

Capt. Belle K. Cohen, Stanford University, Stanford, California, physical therapy.

First Lieut. Charles C. Pixley, Columbia University, New York, orthopedic surgery.

First Lieut. Richard C. Bodie, Cook County Hospital, Chicago, surgery.

AIR FORCE

WORLDWIDE EVACUATION BY AIR OF MILITARY PATIENTS

Worldwide air transportation of military medical patients, now carried largely by hospital ships and trains, was taken over October 1 by the Military Air Transport Service. The decision to switch to air evacuation of the sick and wounded of the three armed services was based on recommendations made by the joint chiefs of staff, the director of Medical Services, Department of Defense and the surgeons general of the Army, Navy and Air Force.

Evacuation by air of patients overseas will remove from service two war-famous hospital ships, the United States Army Transport *Comfort* and the United States Army Transport *Hope*. Also taken out of service by the new order will be the hospital train which has been used in the United States to distribute patients to government hospitals.

Trans-Atlantic air evacuation flights will be more than doubled during October, to provide the three hundred spaces allocated to patients from the European Command. The new schedule includes ten round trips monthly instead of the current four round trips.

During October the 300 mainland-bound patients from the European theater will be flown in C-54 aircraft, which have been used since wartime for long distance air evacuation, and the newer C-121's with pressurized cabins. During the month of November, C-121 flights will be increased in the Atlantic Division for both patients and passengers.

A study of air evacuation for the joint chiefs of staff revealed that 21 times more medical personnel are required for evacuation by surface vessel than for evacuation by air. For an average 10,000 nautical-mile trip, a Military Sea Transport Service (MSTS) hospital ship carrying 300 patients and manned by 126 Medical Corps personnel, including eight doctors, requires forty-five days for a round trip, according to the study. A Military Air Transport Service C-54 air evacuation aircraft carrying 34 patients and manned by 3 attendants (1 nurse and 2 medical corpsmen) requires ten days to make the same trip. A flight surgeon flies with patients whose condition indicates a need for a surgeon.

In addition to the saving in personnel, patients returned to the United States by aircraft can begin specialized treatment from thirty to ninety days ahead of those transported by hospital ship, with consequent earlier recovery and return to duty. In rare cases where air evacuation is "medically contraindicated" the patients returning from overseas will be moved in the sick bays of Military Sea Transport Service troop transports and within the United States by ambulance or train.

Total medical evacuation by air is already a reality in the Alaskan and Caribbean theaters. The average patient load from the Caribbean is 30 per month and 50 from Alaska. Present commitments from the Pacific theater is 240 a month with a

projected load of 500, while the Atlantic Division patient traffic will be increased from 135 to 300 for October.

When the system becomes operative, all patients to be flown to the United States will be sent to the Air Force 495th Medical Group Hospital at Wiesbaden, Germany, which has been designated the European Command Air Evacuation Holding Hospital. Military Air Transport Service aircraft will continue to use the Rhein-Main base in Germany as an operational base but will use Wiesbaden, within 4 miles of the hospital, as the loading point for returning patients. Fairfield-Suisun Air Force Base, Fairfield, Calif., is the mainland terminus for Military Air Transport Service Pacific Division flights and Westover Air Force Base, Chicopee Falls, Mass., for the Atlantic Division.

Although Military Air Transport Service was not formed until July 1948, the Air Force component of this integrated service, the Air Transport Command, began carrying patients from forward areas to mainland hospitals during the early phases of World War II and in the four years of 1942 to 1945, inclusive, evacuated 1,335,000 patients by air (including intratheater as well as transoceanic flights), flying a total of 953,000,000 patient miles.

Naval Air Transport Service, which was integrated with Air Transport Command to form Military Air Transport Service, likewise had war-time experience in air evacuation from combat areas. Naval Air Transport Service evacuated 86,000 patients from 1942 to 1945 in nearly 6,000 flights. Marine Corps aircraft added another 16,000 patients to that total.

While the Military Air Transport Service has developed air evacuation to its present high degree, the Army was the pioneer in this field. The first recommendation for use of aircraft in the transportation of patients was made by Capt. George H. R. Gosman (MC) to the Surgeon General of the Army in 1910.

PUBLIC HEALTH SERVICE

FORTY MILLION DOLLAR CLINICAL CENTER

The clinical center being built for the National Institutes of Health at Bethesda, Md., will be a combined hospital and research institution, and according to Oscar Ewing, Federal Security Administrator, will house one of the best equipped medical and basic science laboratories ever built, together with hospital facilities for 500 patients. The fourteen story, $40,000,000, air-conditioned building is scheduled for completion by July 1952. Planning for the clinical center was assigned to a special committee which visited a large number of new hospitals and medical science laboratories throughout the United States. Surgeon General Leonard A. Scheele of the Public Health Service said that because of the painstaking care necessary before a new treatment is given to patients, and owing to the need for elaborate studies during treatment, laboratory space will be twice that assigned to patients. Working with the planning committee was a staff of experts under Dr. Jack Masur, director of the center, and architects of the Public Buildings Administration, General Services Administration, under Commissioner W. E. Reynolds. Patients will be selected from all parts of the country according to the nature of their illness. Only patients with the particular disease under study at the center can be accepted. A 500 seat scientific auditorium will be equipped with television, and a few seats will be specially wired for the hard of hearing. There will be an eight room surgical suite, and all anesthesia will be done by physicians. Dr. R. E. Dyer, director of the National Institutes of Health, will supervise the over-all operation of the center. Dr. Norman H. Topping, associate director of the National Institutes of Health, said that the government already has "colonies" of trainees for the center established throughout the country who are being recruited and trained for the particular type of research desired. Dr. Scheele said, "This is to be a research center, not an institution in competition with private physicians and private hospitals." There will be intimate collaboration between medical schools and the center. Richard Morris wrote in *The Washington Post*, September 4, that this is one of the reasons why officials at the National Institutes of Health believe that Washington will become the medical capital of the world. Additional details concerning the center were published in THE JOURNAL, September 24, page 271.

Fig. 1.—Clinical Center, National Institutes of Health, Bethesda, Md.

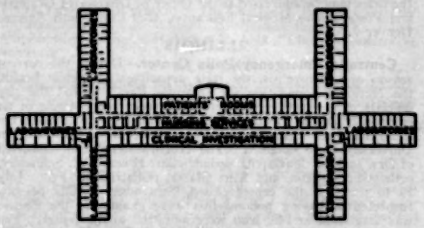

Fig. 2.—Typical floor plan of the clinical center.

MISCELLANEOUS

REPORT ON VOCATIONAL REHABILITATION

The annual report of the Office of Vocational Rehabilitation states that the fiscal year 1948 wound up the first five year period under strengthened legislation with a record of 219,000 rehabilitations as against 210,000 in the preceding twenty-three years under limited legislative authority. Rehabilitating disabled civilians into suitable employment reached its highest peak during 1948 with 53,000 handicapped men and women returned to economic independence.

The annual rate of earnings for the group rehabilitated in 1948 is estimated at $86 million in contrast to $17 million before rehabilitation. Only 23 per cent of the rehabilitants were working at the time they began receiving rehabilitation services, and they were in jobs that generally were hazardous to their health and safety or to the health and safety of others. The report stated that the average rehabilitant will repay, in federal income taxes alone, $10 for every federal dollar spent in his rehabilitation if he is employed only 85 per cent of full time during the rest of his working life.

The report emphasizes that the state-federal system provides virtually every service necessary to convert the disabled dependent into a wage-earning, self-supporting citizen. Medical, surgical, psychiatric and hospital services are provided to effect his physical restoration. Counsel and guidance are given in order that he may select the job for which he is best fitted. Training on the job, in schools, colleges or trade schools or even through tutors or correspondence schools is given to prepare him to do the right job well. A job is then found for him, and his progress is followed up to the point where both he and his employer are satisfied.

Medical News

(Physicians will confer a favor by sending for this department items of news of general interest; such as relate to society activities, new hospitals, education and public health. Programs should be received at least two weeks before the date of meeting.)

CALIFORNIA

Study of Food Factors in Plants.—The U. S. Public Health Service has given a grant of $2,916 to Daniel I. Arnon, Ph.D., associate professor of plant nutrition, University of California, Berkeley, as part of a program to support research that will provide a better understanding of "those forces in nature that can be used to improve health and food production."

Prize Essay.—The Los Angeles Heart Association has selected a paper submitted by Marvin J. Rosenburg, Los Angeles, entitled "Position of Precordial Leads; An Anatomic Study," as the prize essay of the year. The award consists of $100 and the opportunity to present the paper at the fall symposium of the Los Angeles Heart Association, October 18-19. Dr. Rosenburg is a graduate of the University of California Medical School, Berkeley-San Francisco, 1943.

COLORADO

Course in Anesthesiology.—A postgraduate course on the principles of inhalation anesthesiology will be given at the University of Colorado School of Medicine, Denver, November 18-19. The course, which is organized by both doctors of medicine and dentistry, comprises instruction in the principles and technics of inhalation anesthesia with practical application and demonstrations. A registration fee of $10 will be charged. Inquiries may be addressed to the Office of Director of Graduate and Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 7.

ILLINOIS

Centralia Emergency Polio Center.—During the current season of poliomyelitis, the state department of public health, the National Foundation for Infantile Paralysis and the city officials of Centralia decided to underwrite the opening of an emergency center for the care of poliomyelitis patients in the Centralia area. The services of consultants from Northwestern University were obtained. The Northwestern team consisted of Drs. Jack M. Markovitz, pediatrician; Howard W. Schneider, orthopedic surgeon, and Kurt Glaser, pediatrician. From July 19 to the time the center closed, September 10, 237 persons suspected of having poliomyelitis were examined; the disease was diagnosed in 148, who were admitted to the center. The peak load at any time was 42 patients. Centralia community citizens and voluntary and official agencies contributed time and effort to care for the patients.

Chicago

Loeffler Memorial Foundation.—The Hektoen Institute for Medical Research of the Cook County Hospital has allocated $5,000 of its funds for the creation of a Dr. Ernst Loeffler Memorial Foundation to support research in honor of the recently deceased research associate of the institute.

Forty Lectures for General Practitioners.—South-side Chicago practitioners will sponsor a "back-to-school" movement to study current trends in medicine in a series of 40 lectures to be presented under the joint auspices of the south-side regional chapter of the American Academy of General Practice and the University of Chicago School of Medicine. Beginning November 2, classes will be held weekly on Wednesdays at 8:30 p. m. Forty of the University of Chicago's 375 full time staff of physicians will lecture. Among the lecturers scheduled for early sessions of the course will be: Drs. Wright Adams, Emmet B. Bay, Alf Alving and Leon O. Jacobson from the department of medicine; Drs. Dallas B. Phemister, Lester R. Dragstedt, William E. Adams, Dwight E. Clark and J. Garrott Allen from the department of surgery, and Albert L. Lehninger, Ph.D., of the department of biochemistry. The course is designed to present basic scientific information as supplied to the clinical field. Special emphasis will be given to radioactive isotopes, postoperative care, antibiotics and other medical developments.

Dr. Roscoe Miller Becomes President of Northwestern University.—About 2,500 persons attended the ceremonial inauguration on October 6, on the Evanston campus of Dr. J. Roscoe Miller as the twelfth president of Northwestern University. After the induction ceremonies, the honorary degree of doctor of laws was conferred on Dr. Miller by his predecessor, president emeritus Franklyn Snyder. Dr. Harold Dodds, president of Princeton University, presented an address at the inaugural banquet. Dr. Miller joined the faculty at Northwestern 19 years ago and was dean of the Medical School from 1941 until he became president of the University. He is a native of Utah, was dean and associate professor of medicine at Northwestern and last year was president of the Chicago Medical Society. In his inaugural address, Dr. Miller said, "The human mind is a greater power by far than the atom bomb, and a power we need not fear when it operates in a climate of freedom. We have everything to fear," he said, "when the human mind is curbed and perverted." He called on higher education to develop enlightened intellect, broad human sympathies and responsible character. "The indispensable condition for this job," he said, "is freedom." "We must continue to maintain universities that can resist political pressure or pressure from organized groups or vested interests."

MARYLAND

Fourth Friedenwald Memorial Lecture.—The fourth Julius Friedenwald Memorial Lecture of the University of Maryland will be delivered by Dr. Henry L. Bockus, professor of gastroenterology, University of Pennsylvania Graduate School of Medicine, Philadelphia, on October 27. He will speak on "Acute Pancreatitis." The lectureship was established in 1941 in honor of Dr. Friedenwald, formerly professor of gastroenterology.

State Society Meeting.—The Medical and Chirurgical Faculty of the State of Maryland met in Chestertown, Kent County, October 20. Dr. Jacob E. Finesinger, assistant professor of psychiatry, Harvard Medical School, Boston, and professor-elect of psychiatry, University of Maryland School of Medicine, Baltimore, spoke on "An Operational Approach to the Doctor-Patient Relationship." A tea and cocktail party and a golf tournament were held at the Chester River Yacht Country Club.

NEW YORK

Society News.—The New York Institute of Clinical Oral Pathology will hold its monthly conference October 31 at the New York Academy of Medicine at 9 p. m. Dr. Henry D. Diamond, New York, will read a paper entitled "The Significance of Enlarged Cervical Lymph Nodes."——The Medical Society of the State of New York with the cooperation of the New York State Department of Health has arranged postgraduate instruction for the Cayuga County Medical Society, October 27 at 8 p. m. at the Springside Inn, Auburn. Dr. Joseph D. Godfrey, Buffalo, will speak on "The Treatment of Low Back Pain."

Postgraduate Training in Anesthesiology.—The New York State Society of Anesthesiologists, in cooperation with the American Society of Anesthesiologists, is offering postgraduate training in anesthesiology to any physician in this state who is engaged in full or part time practice of anesthesiology. Instruction is individualized and informal and will cover fundamental aspects of clinical practice. Training will be given in or close to the applicant's own community on a flexible time schedule. There is no tuition fee. Interested physicians may write to S. G. Hershey, New York State Society of Anesthesiologists, 745 Fifth Avenue, New York.

New York City

Discussion of Pulmonary Diseases.—The Tuberculosis Sanatorium Conference of Metropolitan New York held a clinical session October 19 in the Cornell University Medical College Amphitheatre. The program was a panel discussion on "The Heart in Relation to Chronic Pulmonary Disease."

The First Harvey Lecture.—Dr. Herman M. Kalckar, research professor, Institute for Medical Physiology, University of Copenhagen, Denmark, will deliver the first Harvey Lecture of the current series at the New York Academy of Medicine on Oct. 27, 1949. Dr. Kalckar will speak on "Enzymatic Reactions in Purine Metabolism."

The Annual Salmon Lectures.—Dr. Stanley Cobb will deliver the annual Salmon Memorial Lectures on November 8, 9 and 10 at 8:30 p. m. at the New York Academy of Medicine, on "Emotions and Clinical Medicine." Dr. Cobb has served on the faculty of the Harvard Medical School, Boston, since 1919, and as Bullard Professor of Neuropathology since 1926. He has been president of the American Neurological Association and is a member of the Harvard Epilepsy Commission, the American Psychiatric Association, Association for Research in Nervous and Mental Disease, Association of American Physicians and many other societies.

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PENNSYLVANIA

State Medical Election.—At the annual meeting of the House of Delegates of the Medical Society of the State of Pennsylvania, held on September 28 in Pittsburgh, the following officers were elected: Drs. E. Roger Samuel, Mt. Carmel, president; Harold B. Gardner, Pittsburgh, president-elect, and Walter F. Donaldson, Pittsburgh secretary-treasurer.

Public Health Appointment.—Dr. Gouverneur V. Emerson, Milford, former Brigadier General in the U. S. Army Medical Corps, has been appointed supervising physician in the Bureau of Tuberculosis Control, State Department of Health at Harrisburg. Dr. Emerson is a graduate of the Medico-Chirurgical College of Philadelphia, 1914.

Philadelphia

Appointments and Promotions.—Dr. Joseph H. Boutwell Jr. has been appointed assistant professor of physiologic chemistry and M. Noble Bates, Ph.D., assistant professor of chemistry on the staff of the Temple University School of Medicine. Dr. Boutwell is a graduate of Northwestern University School of Medicine, 1946. Dr. Bates received his Ph.D. degree from Cornell University. The following instructors have been appointed: Dr. Charles R. Shuman, internal medicine; Dr. Richard W. Somntag, ophthalmology; Dr. William N. Campbell, pathology; Dr. Hadwin K. Fischer and Dr. Stuart M. Finch, psychiatry; Dr. Charles W. Umlauf, neurology, and Dr. John B. Roxby Jr., assistant instructor in dermatology. The following physicians have been promoted: Louis Cohen, to associate professor of internal medicine; Robison D. Harley, to assistant professor of ophthalmology; William M. Hart, to assistant professor of research ophthalmology; Louis F. Hinman, to associate of ophthalmology, and Meyer L. Niedelman, to associate in dermatology.

SOUTH CAROLINA

Annual Postgraduate Seminar.—The eighth annual alumni postgraduate seminar will be held in the Baruch Auditorium, Medical College of the State of South Carolina, on November 3-4. The program includes the following speakers:

Richard H. Lyons, Syracuse, N. Y., Pathogenesis of Heart Failure and Its Treatment.
J. Englebert Dunphy, Boston, Treatment of Massive Upper Gastrointestinal Bleeding.
James F. Norton, Jersey City, N. J., Management of Pregnancy with Emphasis on Early Recognition of Toxemia.
Francis F. Schwentker, Baltimore, Treatment of Pneumonia in Children.
Earle M. Chapman, Boston, Thyroid Diseases.
Howard Ulfelder, Boston, Critical Review of Exfoliative Cytology as Applied in the Diagnosis of Malignant Diseases.
Lloyd G. Lewis, Washington, D. C., Cancer of the Genitourinary Tract.
T. Nelson Carey, Baltimore, Diabetes.

TEXAS

Pediatrics Conference at Galveston.—The twelfth pediatric Postgraduate Conference will be held at the University of Texas Medical Branch, Galveston, November 7-12, under the auspices of the University of Texas Child Health Program in cooperation with the Maternal and Child Health Division, Texas State Board of Health. Guest speakers include:

Stuart S. Stevenson, Pittsburgh, Care of the Newborn.
James G. Hughes, Memphis, Tenn., Pertinent Points in Premature Management.
Oswald S. Wyatt, Minneapolis, Surgical Emergencies During Infancy.
Douglas N. Buchanan, Chicago, Problems in Diagnosis of Neurosurgical Disorders in Children.
Angus M. McBryde, Durham, N. C., Office and Hospital Management of Diarrhea in Infants.
Joseph Stokes Jr., Philadelphia, The Encephalitides—Their Diagnosis and Management.

Physicians of Texas may request special allowance for per diem, travel and tuition. A limited number of physicians will be accepted. Application blanks may be secured by writing to Dr. Arild F. Hansen, Director, University of Texas Child Health Program, Galveston.

Post Graduate Medical Assembly of South Texas.—This organization will hold its fifteenth annual meeting November 20-December 1 at the Shamrock Hotel, Houston. Guest speakers include: Drs. Carl E. Badgley, Ann Arbor, Mich.; Edward D. Churchill, Boston; Louis H. Clerf, Philadelphia; Lewis Dexter, Boston; R. Gordon Douglas, New York; Michael H. Ebert, Chicago; F. Bruce Fralick, Ann Arbor, Mich.; Lot D. Howard Jr., San Francisco; Reed M. Nesbit, Ann Arbor, Mich.; Emil Novak, Baltimore; Ralph V. Platou, New Orleans; Isidor S. Ravdin, Philadelphia; Edmund B. Spaeth, Philadelphia; Lloyd J. Thompson, Winston-Salem, N. C., and Paul D. White, Boston. Registration fee is $20. Checks may be mailed in advance to the Assembly Office, 229 Medical Arts Building, Houston.

WASHINGTON

University Mobile Laboratory.—The University of Washington Medical School's department of public health and preventive medicine has a mobile laboratory which can be rushed to any part of the state for epidemic control or for use in field research. It was used first in Yakima Valley for a follow-up research study of encephalitis which began August 1. The research was a joint investigation of the Hooper Foundation and the University of California, San Francisco, Washington University School of Medicine, Seattle, and the Washington State Department of Health. Materials collected will be studied in detail later at the medical school. The laboratory, reportedly one of the few of its kind in the nation, was converted from a surplus army ambulance.

State Society Honors Dr. Worcester.—A plaque was erected September 12 in the Health Sciences Building of the University of Washington by the Washington State Medical Association honoring Dr. John L. Worcester, University of Washington anatomy professor who died in 1947, and the university has designated the anatomy department facilities as the Worcester Memorial Laboratories. Dr. Worcester came to the university in 1917 to organize a medical school. When World War I intervened, plans for the school were dropped. Dr. Worcester remained on the faculty as professor of anatomy until his death. He was known for three decades on the campus as the "godfather of pre-medics." The plaque was presented to Dr. H. Stanley Bennett, head of the anatomy department, by Dr. Marion M. Kalez of Spokane, representing the state medical association.

WYOMING

State Medical Election.—The Wyoming State Medical Society at its meeting in September elected the following officers for the coming year: Dr. DeWitt Dominick, Cody, president; Dr. Karl E. Krueger, Rock Springs, president-elect; Dr. Paul R. Holtz, Lander, vice president; Dr. George H. Phelps, Cheyenne, secretary; Dr. E. Earl Whedon, Sheridan, editor, *Rocky Mountain Medical Journal*, and Arthur R. Abbey, Cheyenne, executive secretary.

ALASKA

Survey of Mental Health.—A federal government investigative team has been studying Alaska's mental health conditions by visiting communities to gather first hand information. Dr. Winfred Overholser, Washington, D. C., headed the group, consisting of Dr. Dale C. Cameron, Washington, D. C.; M. W. Goding, and Seymour Littman. Local members of the group were Drs. James Googe, Juneau, medical director of the Alaska Native Service, and C. Earl Albrecht, Juneau, commissioner of health. The survey will result in a long range program to provide treatment for Alaskan mental patients in line with modern psychiatric and medical practice.

GENERAL

American Clinical and Climatological Association.—This organization will hold its sixty-second annual meeting at the Greenbrier, White Sulphur Springs, W. Va., October 27-29, under the presidency of Dr. Maurice C. Pincoffs, Baltimore. Among many scientific papers to be presented will be the Gordon Wilson Lecture: "The Changing Status of the Rickettsioses," by Dr. Joseph E. Smadel, of the Army Medical Department of Research and Graduate School, Washington, D. C. Following the business meeting Thursday afternoon will be a cocktail party, dinner and dancing for members and their wives.

American Society of Tropical Medicine.—This organization will hold its forty-fifth annual meeting at the Peabody Hotel, Memphis, Tenn., November 6-9, under the presidency of Dr. Norman H. Topping, Bethesda, Md. Among the numerous papers to be presented will be the fourteenth annual Charles F. Craig Lecture, to be delivered by Dr. Joseph E. Smadel, Army Medical Department, Research and Graduate School, Washington, D. C., on "Antibiotics in Typhus and Typhoid Fever." The Bailey K. Ashford Award will be presented at the Monday afternoon regular session.

New Genetics Journal.—The American Society of Human Genetics, organized about a year ago, will start to publish in October *The American Journal of Human Genetics*, pertaining to research in the subject. It will appear in annual volumes of four issues each. The price of the journal is $8 per volume. The editor is Charles W. Cotterman, Ph.D., Heredity Clinic, University of Michigan, Ann Arbor, to whom manuscripts should be sent for consideration. Subscriptions to the journal should be addressed to the secretary of the society, Herluf H. Strandskov, Ph.D., department of zoology, University of Chicago, Chicago 37. Checks should be made payable to the American Society of Human Genetics.

Society for Crippled Children.—The annual convention of the National Society for Crippled Children and Adults will be held at the Commodore Hotel, New York, November 7-10, with John J. Lee, Ph.D., president of the society and dean of the graduate school at Wayne University College of Medicine, Detroit, Mich., presiding. Among the speakers included in the program are: Drs. Anton J. Carlson, Chicago; George G. Deaver, New York; Leslie B. Hohman, Durham, N. C.; Frank H. Krusen, Rochester, Minn.; George F. Lull, Chicago; William C. Menninger, Topeka, Kan.; Meyer A. Perlstein, Chicago, and Howard A. Rusk, New York.

Urology Award.—The American Urological Association offers an annual award of $1,000 (first prize $500, second prize $300 and a third prize $200) for essays on the result of some clinical or laboratory research in urology. Competition will be limited to urologists who have been in such practice for not more than five years and to residents in urology in recognized hospitals. The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association to be held at the Hotel Statler, Washington, D. C., May 29-June 1, 1950. For details write the secretary, Dr. Charles H. de T. Shivers, Boardwalk National Arcade Building, Atlantic City, N. J. Essays must be in his hands before Feb. 20, 1950.

Scholarship Grant for Cerebral Palsy Study.—Alpha Chi Omega, women's fraternity, has made an additional grant of $10,000 to the National Society for Crippled Children and Adults, to continue a jointly sponsored scholarship program for training professional personnel to work with victims of cerebral palsy. The $10,000 is in addition to the $15,000 already granted. Since the first awards were made in 1948, more than twenty-five scholarship grants have been provided to qualified physicians, therapists and other specialists. When they complete their scholarship study, these professional workers assist the National Society's 2,000 state and local units throughout the United States, Hawaii and Alaska, as well as other public and private agencies.

New Heart Association Publication.—Approximately $700,000 has been allocated for heart research this year by the American Heart Association and its affiliates, according to *The American Heart*, quarterly publication of the association, in its September issue. Research awards from the national office totaled $250,000 in 1949, while research funds spent by affiliates include $213,000 distributed by the New York Heart Association (New York City) and $144,000 by the Chicago Heart Association. The American Heart Association's own allocations this year were from funds raised during its 1948 campaign; a minimum of $380,000 from 1949 campaign funds has already been ear-marked for future research awards. The quarterly journal appears in its inaugural issue, an eight page, letter-size, illustrated publication. The first issue of 30,000 copies will go to the association's 8,000 members and for additional public distribution by more than forty affiliated heart associations across the country.

American Academy of Pediatrics. — This organization will hold its eighteenth annual meeting at the Palace Hotel, San Francisco, November 14-17, under the presidency of Dr. Warren R. Sisson, Boston. Out of state speakers include:

Meyer A. Perlstein, Chicago, New Drugs in the Treatment of Epilepsy.
Harold B. Levy, Clarence H. Webb and Jacques D. Wilkinson, Shreveport, La., Tularemia as a Pediatric Problem.
William E. Ladd and Orvar Swenson, Boston, Congenital Anomalies of the Esophagus.
Harold W. Dargeon, New York, The Effects of Antifold Compounds on Certain Childhood Cancers.
Sophie Spitz, New York, The Disparity Between Clinical Behavior and Histologic Appearance of Cutaneous Tumors of Childhood.
Edward R. D. Neuhauser, Boston, The Diagnosis and Rationale of Treatment of Neuroblastoma and Embryoma.
Clarence G. Peterson, Portland, Ore., Tumors of Childhood: Surgeon's Viewpoint.
Winthrop M. Phelps, Baltimore, Present Status of the Care of Cerebral Palsy.
Ralph H. Kunstadter, Chicago, The Treatment of Thyrotoxicosis in Children with Thiouren Derivatives.
Thaddeus S. Danowski, Pittsburgh, Potassium Studies in Pediatric Disease.
Harry R. Litchfield, Robert J. Norton, Armand H. Moss and Irving Grossblatt, Ph.D., Brooklyn, The Evaluation of Serum Albumin, Sodium and Potassium Salts and Other Methods of Treatment in Nephroses.
John A. Toomey, Cleveland, Is Weeks' Virus Due to Poliomyelitis? Alfred D. Biggs, Chicago, The Primary Tuberculosis Complex.

Panel and round table discussions will be held November 14-17, and a symposium will be held November 17 at 8 a. m. on "Congenital Anomalies." The registration fee, which includes banquet and luncheon tickets, is $10 for members and $15 for nonmembers.

Meeting on Arteriosclerosis and Geriatrics.—The American Society for the Study of Arteriosclerosis will hold its annual meeting at the Hotel Knickerbocker, Chicago, November 6-7 under the presidency of Dr. Irvine H. Page, Cleveland. Numerous scientific discussions will be presented by physicians throughout the country. Dr. Page will preside at the opening meeting and other chairmen will be Drs. E. Cowles Andrus, Baltimore; G. Lyman Duff, Montreal, Canada, and Louis N. Katz, Chicago. The Gerontological Society will also meet at the Hotel Knickerbocker, November 5-6. At the Saturday afternoon session of the society there will be a symposium on nutrition with Dr. Edward J. Stieglitz, Washington, D. C., as chairman.

The societies will join in a banquet Sunday night at 7:30. The guest speaker will be Dr. Alan R. Moritz, newly appointed professor of pathology, Western Reserve University School of Medicine, Cleveland.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the periods indicated have been received from the National Office of Vital Statistics, U. S. Public Health Service.

Division and State	Week Ended Oct. 8, 1949	Oct. 9, 1948	Median, 1944-1948	Jan. 1 to Oct. 8, 1949	Oct. 9, 1948
New England States					
Maine	12	2	2	411	34
New Hampshire	1	..	2	177	18
Vermont	3	1*	2	110	24*
Massachusetts	93	11	29	1,389	342
Rhode Island	10	1	1	128	7
Connecticut	63	7	7	805	97
Middle Atlantic States					
New York	222	92	92	4,080	1,145
New Jersey	85	41	33	1,176	616
Pennsylvania	39	33	33	626	589
East North Central States					
Ohio	39	62	62	1,205	970
Indiana	62	12	12	504	228
Illinois	71	70	69	2,510	977
Michigan	249	35	35	2,379†	547
Wisconsin	61	35	35	879	465
West North Central States					
Minnesota	88	88	69	1,653	947
Iowa	37	84	34	940	483
Missouri	42	14	12	1,170	253
North Dakota	9	9	3	238	102
South Dakota	9	36	3	282	281
Nebraska	31	53	10	584	589
Kansas	23	10	5	621	261
South Atlantic States					
Delaware	..	3	2	38	122
Maryland	107	12	12	1241	79
District of Columbia	4	6	5	82	105
Virginia	12	17	14	975	689
West Virginia	21	7	7	219	135
North Carolina	6	47	12	980	2,388
South Carolina	3	8	3	94	320
Georgia	16	6*	5	276	197*
Florida	10	7	5	212	222
East South Central States					
Kentucky	26	14	8	534	172
Tennessee	19	12	11	452	319
Alabama	8	7	3	272	168
Mississippi	17	2	3	226	139
West South Central States					
Arkansas	249	3	3	8554	126
Louisiana	3	9	6	204	125
Oklahoma	43	9	6	1,122	220
Texas	34	30	29	1,285	1,389
Mountain States					
Montana	1	4	4	76	85
Idaho	20	3	2	200	97
Wyoming	4	1	1	101	68
Colorado	25	1	6	531	89
New Mexico	13	4	2	142	63
Arizona	6	7	3	141	118
Utah	27	9	6	295	74
Nevada	2	..	..	13	4
Pacific States					
Washington	91	25	18	985	233
Oregon	12	8	8	262	124
California	170	228	63	1,915	2,511
Total	1,588	1,207*	...	34,742	20,361*
Median, 1944-1948			877	13,628	

* Figures changed by corrected reports.
† Current corrections and cumulative totals: deduct, Michigan 1 case week ended Aug. 13 and 2 cases week ended September 3; additions, Maryland 3 cases August onset and 9 cases September onset; Arkansas 1 case week ended Oct. 1.

Marriages

JOHN P DOCKTOR, Ellsworth, Pa., to Miss Patricia Anne McCue of Woodside, L. I., N. Y., in New York, July 30.

LAURIE CRAIG DICKSON Jr., Charlotte, N. C., to Dr. MARY DYKEMA ELY at Grosse Pointe, Mich., July 25.

CHARLES MICHAEL VAN DUYNE, Pontiac, Ill., to Miss ANNA Christine Pearce of San Francisco, recently.

ROBERT PAUL DOSSIE Jr., Buffalo, N. Y., to Miss Barbara Louise Smith at Ann Arbor, Mich., July 2.

Deaths

Bruce Hutchinson Douglas ● since 1941 commissioner of health of Detroit; born in Des Moines, Iowa, Aug. 26, 1892; Rush Medical College, Chicago, 1921; chairman, department of preventive medicine and public health and professor at the Wayne University College of Medicine; lecturer in public health practice and epidemiology, University of Michigan School of Public Health in Ann Arbor; specialist certified by the American Board of Internal Medicine; fellow of the American Public Health Association and the American College of Physicians; member and past president of the National Tuberculosis Association, Michigan Tuberculosis Association, Mississippi Valley Conference on Tuberculosis, American Sanatorium Association and the Michigan Trudeau Society; member of the American Association for the Advancement of Science and the International Union Against Tuberculosis; consultant, tuberculosis service, and at one time acting superintendent of the Herman Kiefer Hospital and tuberculosis controller for the city department of health; served as a member of the committee on tuberculosis of the National Research Council; in 1922-1923 assistant medical director, medical director, 1923-1924, and superintendent from 1924 to 1933 of the Maybury Sanatorium in Northville, Mich., where he was a consultant; consultant, tuberculosis division, U. S. Public Health Service; served on the editorial board of *American Review of Tuberculosis;* author of a chapter on tuberculosis in Top's "Handbook of Communicable Diseases"; for his work in fighting tuberculosis he was made the posthumous recipient of the Knight of Crusade award, presented by the Tuberculosis and Health Society; killed August 11, aged 56, in an automobile accident.

Edward Waldemar Anderson, Des Moines; born in Marion, Iowa, Nov. 11, 1898; State University of Iowa College of Medicine, Iowa City, 1923; member of the American Medical Association; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; fellow in medicine at the Mayo Foundation in Rochester, Minn., from Jan. 1, 1925 to August 1930; formerly instructor in medicine at the Dartmouth Medical School, Hanover, N. H., where he had been an internist at the Hitchcock Clinic; served on the staffs of the Broadlawns Hospital and the Iowa Methodist Hospital, where he died September 5, aged 50, of cerebral hemorrhage.

Benjamin Ward Baker ● San Antonio, Texas; born in New Boston, N. H., Aug. 6, 1874; Dartmouth Medical School, Hanover, N. H., 1898; member of the New Hampshire Medical Society, American Psychiatric Association and the New England Society of Psychiatry; member and past president and secretary of the American Association for the Study of Mental Deficiency; for many years assistant physician and assistant superintendent of the Taunton (Mass.) State Hospital; formerly superintendent of the Laconia (N. H.) State School; died August 17, aged 75, of coronary occlusion.

Samuel Harold Gray ● St. Louis; Columbia University College of Physicians and Surgeons, New York, 1923; associate professor of pathology at Washington University School of Medicine; specialist certified by the American Board of Pathology; member of the American Association of Pathologists and Bacteriologists, College of American Pathologists, American Society for Experimental Pathology and the American Society of Clinical Pathologists; served during World War II; affiliated with the Jewish Hospital; died in Cameron, Wis., August 18, aged 52.

Stanley W. Insley ● Detroit; Detroit College of Medicine and Surgery, 1922; assistant professor of clinical medicine at his alma mater, now known as the Wayne University College of Medicine; past president and secretary of the Wayne County Medical Society; member of the American Association for the Study of Allergy; past president of the Michigan Allergy Society; served as editor of the *Detroit Medical News;* affiliated with St. Mary's Hospital, Mount Carmel Hospital and the Providence Hospital, where he died August 9, aged 50.

William Ross Rosanoff, Alhambra, Calif.; University of California Medical School, San Francisco, 1940; assistant clinical professor of nervous diseases at the College of Medical Evangelists in Los Angeles; member of the American Psychiatric Association and the American Medical Association; specialist certified by the American Board of Psychiatry and Neurology; senior assistant surgeon in the U. S. Public Health Service from 1942 to 1946; affiliated with the Alhambra Sanatorium in Rosemead; died August 17, aged 33, of injuries received in an automobile accident.

Thomas Francis Clark ● Taunton, Mass.; Harvard Medical School, Boston, 1901; died July 24, aged 81.

Charles C. Cook, Baltimore; University of Maryland School of Medicine, Baltimore, 1901; died in the University Hospital July 6, aged 84, of cerebrovascular accident.

Samuel Einstein, New York; University and Bellevue Hospital Medical College, New York, 1913; member of the American Medical Association; died in Peekskill, N. Y., August 25, aged 60.

O. Charles Erickson ● Sioux Falls, S. D.; Rush Medical College, Chicago, 1921; fellow of the American College of Surgeons; affiliated with Sioux Valley and McKennan hospitals; died July 30, aged 52.

Herbert Clifford Fulmer, Thousand Island Park, N. Y.; Syracuse University College of Medicine, 1916; died recently, aged 55, of cardiac asthma.

Ernest Lester Gates, Greenville, Ky.; Hospital College of Medicine, Louisville, 1903; member of the American Medical Association; served as a member of the state board of health; died recently, aged 70.

Charles William Gerber ● Las Cruces, N. Mex.; Denver College of Medicine, 1899; past president of the New Mexico Medical Society; fellow of the American Public Health Association; for many years district health officer; died July 30, aged 72, of chronic myocarditis, bronchiectasis and pulmonary emphysema.

Leonard Andrew Glover ● Wichita, Falls, Texas; Baylor University College of Medicine, Dallas, 1931; member of the Radiological Society of North America; affiliated with the Bethania Hospital and Wichita General Hospital, where he died July 21, aged 47.

Emmett Frank Guy, Milwaukee; Northwestern University Medical School, Chicago, 1927; member of the American Medical Association; affiliated with St. Mary's Hospital; died recently, aged 47, of coronary occlusion.

Edmond Chaille Hancock, Arlington, Texas; Tulane University of Louisiana School of Medicine, New Orleans, 1917; member of the American Medical Association; died in Fort Worth recently, aged 56, of hypertension and cerebral hemorrhage.

Robert Alexander Hardie, Lansing, Mich.; University of Toronto Faculty of Medicine, Toronto, Canada, 1890; for many years a medical missionary in Seoul, Korea; died recently, aged 84, of arteriosclerosis.

Edward D. Havens, Cicero, Ind.; Medical College of Indiana, Indianapolis, 1903; served during World War I; died recently, aged 73, as the result of a fall.

Taylor August Mast, Chireno, Texas; Barnes Medical College, St. Louis, 1897; affiliated with the City Memorial Hospital, Nacogdoches; died July 14, aged 79, of cerebral hemorrhage.

Jesse B. Mossman, Camarillo, Calif.; Northwestern University Medical School, Chicago, 1925; affiliated with the Camarillo State Hospital; died recently, aged 56, of coronary heart disease.

Joseph Neff, Los Angeles; Medico-Chirurgical College of Philadelphia, 1899; died August 17, aged 78.

Thomas Canfield Pounds, Tegucigalpa, Honduras, Central America; University of Southern California College of Medicine, Los Angeles, 1903; served during World War I; died July 28, aged 71.

Arthur Lincoln Reagh, Boston; Harvard Medical School, Boston, 1898; member of the American Medical Association; died in the City Hospital recently, aged 77.

Henry Oliver Schalebon, Edinburg, Texas; University of Minnesota College of Medicine and Surgery, Minneapolis, 1903; member of the American Medical Association; died recently, aged 67, of carcinoma of the stomach.

Adam E. Smith, White Plains, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1895; formerly on the faculty of his alma mater; died July 26, aged 75, of arteriosclerosis and paraplegia.

Pier Giuseppe Spinelli, New York; Regia Università di Napoli Facoltà di Medicina e Chirurgia, Italy, 1898; died in the Mother Cabrini Hospital recently, aged 76, of acute cardiac dilatation, following a prostatectomy.

● Indicates "Fellow" of the American Medical Association.

Foreign Letters

AUSTRALIA

(From Our Regular Correspondent)

Oct. 8, 1949.

"Free Medicine" Act Declared Invalid

The Full High Court of Australia today declared that in its judgment the Pharmaceutical Benefits Act 1947-1949 is invalid. This ends the second round of the five year "battle of the bottle" with the points heavily in favor of the British Medical Association. The first round opened with the passing of the Pharmaceutical Benefits Act 1944. It was challenged by the Victorian Branch of the British Medical Association and declared invalid by the High Court in 1945, on the grounds that the constitution of the commonwealth did not provide for the appropriation of money for social services other than (according to section 51) invalid and old age pensions.

The commonwealth government opened the second round in 1946 by holding a referendum. The necessary majority of votes approved the new wording of section 51:

"The provision of maternity allowances, widows' pensions, child endowments; unemployment, pharmaceutical, sickness, and hospital benefits; medical and dental services (but not so as to authorise any form of civil conscription), benefits to students and family allowances."

The phrase "but not so as to authorise any form of civil conscription" is important.

THE SECOND ACT

This new amendment to the constitution gave the government confidence to pass the second "free medicine" legislation, the Pharmaceutical Benefits Act 1947-1949. Included in this Act was section 7*A*, which prescribed that a medical practitioner shall not write a prescription for any medicine in the formulary except on a prescription form supplied by the commonwealth. The penalty for a breach of this regulation was a fine of £50 ($110).

The prescription form supplied by the government entitled the recipient to receive his medicine at the expense of the government (from taxation contributions to the social services fund).

"CIVIL CONSCRIPTION"

The British Medical Association claimed that this section 7*A* amounted to "civil conscription." This was the view of the British Medical Association's legal adviser. The British Medical Association claimed that doctors would be hindered in the proper treatment of their patients by the requirements of the act. It claimed that the act was invalid or that seven sections and twelve regulations were invalid.

The phrase "civil conscription" is a novelty, and one of the judges thought that the parliamentary draftsman had shied at the naked simplicity of the word "compulsion" and had coined that more harmless-sounding phrase. At any rate, compulsion in any guise was the cause of the act being declared invalid, because four of the six judges in the court held that section 7*A* of the act amounted to a form of civil conscription.

"It was true," stated the judgment "that no one was compelled to adopt the profession of medicine. But, if he did so, he was affected in his freedom of practice and in his means of living unless he subscribed to the scheme whereby he was subject to control as to the form of treatment and the drugs he might prescribe.

"For the general practitioner, noncompliance meant loss of practice. The use of a particular form or the signing of a prescription was no mere automatic action.

"It was the result of the practitioner's examination and overhaul of the patient, diagnosis of the complaint, and the choice of the treatment, drugs, materials and appliances which his knowledge and skill dictated. It was the culmination of the medical service rendered by the practitioner to the patient.

"This might perhaps not be compulsion in the sense in which the word was used in connection with military service, but it was a form of civil conscription.

"It would no doubt be a form of industrial conscription to compel people by law to work in industries, whether industries were carried on by the commonwealth or by the states or their authorities, or by private individuals.

"It would be equally a form of civil conscription of medical or dental services to compel medical practitioners to carry on their professions in particular localities.

"A medical practitioner was compelled to render that service in the course of rendering a contractual service to his patient, but it was a service which formed no part of an implied contract for services created by a patient seeking the advice and treatment of a medical practitioner, and the practitioner examining the patient with a view to giving him advice and treatment.

"When Parliament came between patient and doctor and made lawful continuance of their relationship as such dependent on a condition, enforceable by fine, that the doctor should render the patient a special service, unless that service was waived by the patient, it created a situation which amounted to a form of civil conscription.

"This civil conscription could be avoided without any breach of the law to the extent that the doctor vacated the field of medicine, which, however, would involve in many, if not most cases, a considerable loss of practice and income.

"But it was still civil conscription. Military conscription would not cease to be such because those liable to fight might avoid it by a change of occupation.

"To amount to civil conscription it was not necessary that the service should be a full time service, or should be rendered as a member of a corps created for that purpose.

"A power to make laws on medical services could be held to authorise a law for the complete control of medical services, and would enable the government to control practice of the medical profession completely. Similarly, a power to make laws on pharmaceutical benefits could authorise a law for the complete control of pharmaceutical chemists' businesses.

"The object of conferring on parliament the power of providing pharmaceutical benefits was to provide these benefits under a scheme which would leave anyone at liberty to take part or stand aside, whether as doctor, chemist or patient."

Two of the judges held that the invalidity of section 7*A* did not affect the other provisions of the act. If it were struck out, the act would work as a completely voluntary scheme.

(It was the failure of the act to work as a voluntary scheme which caused the introduction of section 7*A* into the act, in April 1949.)

A dissenting judge held that "the material aid given to a scheme to promote for human needs was commonly prescribed by the word "benefit."

"When this word was applied to that subject matter," he said, "it signified a pecuniary aid, service, attendance or commodity made available for human beings under social welfare or social security legislation.

"State law commanding a doctor to sign a prescription or to date it would not engage the doctor in the service of the state. It would not be a form of conscription.

"This section did not provide for any form of civil conscription. The act did not by any form of law call any doctor to serve the commonwealth. No doctor was any less a private practitioner than he was before the act was passed.

"A doctor was legally free to decline to write any prescription under section 7*A*."

REACTIONS TO JUDGMENT

"There is nothing the government could do after today's ruling," said Dr. John Hunter, the general secretary of the British Medical Association in Australia. "We do not expect any further legal action by the government."

"The British Medical Association had never argued against the government's right to pass legislation for free medicine.

"Doctors were deeply gratified by the High Court's ruling and believed that all Australians would feel the same way.

"The High Court upheld the view that the act in certain important respects infringed the constitutional safeguard established by the people against invasion by a government of their own and doctors' freedom.

"Doctors could still write their own prescriptions on their own forms. The British Medical Association was right back where it started."

In the Commonwealth Health Department, the judgment of the High Court is taken to mean the collapse of the government's health scheme plans.

The health minister (Senator McKenna), who is a lawyer, is studying the High Court's judgment. He will not decide whether to refer the six judgments to the Attorney-General for a possible appeal to the Privy Council until other possible courses of action have been considered. He would ask the government to consider alternative courses of action designed to insure full pharmaceutical benefits with as little delay as possible.

"As the law amended by the High Court today now stands, each doctor must decide whether his patient is to pay for costly life-saving and disease-preventing drugs or receive them without charge," Senator McKenna said.

BELGIUM

(From Our Regular Correspondent)

Sept. 20, 1949.

International Congress of Dermatology and Syphilology

The recent seventh International Congress of French-Speaking Dermatologists and Syphilologists in Brussels was the first reunion since the war. The subjects on the agenda included: bullous dermatosis; heredity in dermatology; eczema, and the treatment of syphilis.

The studies of Dupont and Piérard on chronic pemphigus and the dermatitis of Duhring-Brocq are noteworthy. They noted that the bullae of chronic pemphigus resemble most those of herpes zoster and of varicella and even those of sheep pox. The dominant lesion consists of degenerative cytologic alterations. In Duhring-Brocq's disease edema constitutes the essential element of the histologic picture; in this characteristic it resembles urticaria and eczema, in which exudative phenomena play an important role. On the basis of these facts the author regards the polymorphic dermatitis of Duhring as of allergic pathogenesis. Pemphigus, on the other hand, must be regarded as an infectious disease, probably due to a virus. Familial pemphigus of Hailey is distinct from chronic pemphigus and has no relation whatever with Darier's disease nor with bullous epidermolysis.

Tzanck discussed (1) the frequency of microbic eczemas and (2) the spectacular role of the antihistaminics in the treatment of eczema, two observations which have greatly enriched the means of therapeutic action have not, however, transformed pathogenic concepts. The third point of discussion was the rapid cure of an eruption by the suppression of a substance previously unsuspected as harmful.

He reported observations in 30 cases of eczema of the eyelids. In transcutaneous tests Tzanck and his collaborators demonstrated reactogenic substances twenty-five times in 30 cases. They chose the eyelids for their investigation because the skin in this region is particularly sensitive and because it is not subjected to traumas.

The cures obtained in several days by only suppressing the reactogenic substance have demonstrated the uselessness of the classic treatments.

It cannot be said that this success solves the problem in the treatment of eczema; this contribution represents only a supplementary, but extremely useful, measure. From the theoretical point of view there is justification for the definition which the author gives of eczema: a reaction of intolerance toward substances which are inoffensive for the majority of persons.

PRINCIPALITY OF MONACO

(From a Special Correspondent)

Sept. 20, 1949.

International Code of Medical Ethics

Carrying on the initiative taken in 1934 by the Prince of Monaco to find means of humanizing war, the Red Cross of Monaco will publish a collective work which constitutes a plan of codification of international medical law. The application of this new branch of international law in time of war gives hope that we shall not see again the atrocities which were committed during World War II.

Two types of facts, which are of immense importance from the point of view of the medical ideal, dominate in medicine during this period, and it is important that practical conclusions be drawn therefrom promptly.

Physicians have been condemned, even executed, in occupied countries for attending injured persons. Physicians have lent the cooperation of their science to political authorities to perpetrate attacks against the life and the health of human beings or have helped to prepare new methods of destruction. It is necessary at any price that in present circumstances one continue to try to find or to create a supergovernmental authority which can intervene to guarantee to medicine the free and noble exercise of its art and to prevent its employment for criminal ends. This is the sphere of international legislation. But it is not enough to draw up laws; it is also necessary that the conscience of the individual be prepared to respect them.

For this reason it will be desirable that all schools and faculties of medicine of the world organize a course in international medical ethics which will specify the rights and duties of the physician in all circumstances of peace and war. This course will be consecrated by a solemn oath such as has been required by the World Medical Association, but in our view it should be administered before an international court of justice which could send a delegation to the various faculties for this purpose.

Since it is taken before a court of international justice, the importance of the oath cannot be misunderstood by anybody, and all who commit perjury can be prosecuted and punished. This oath will be a résumé of international medical ethics.

This is a summary of the efforts made by Monaco. The Academy of Medicine of Paris recently discussed the problem and voted unanimously on the following motion:

"The National Academy of Medicine in recalling the Nuremberg trials and the crimes committed during wars and conflicts of all types against the human being, particularly the injured, the sick, prisoners or those held in detention camps, and refusing to let the medical corps be made the instrument of any pressures whatsoever bearing on the attainment of their physical, moral or intellectual integrity make the vow that the carrying out of medical functions in time of war as in time of peace should be established by a code of international ethics of an obligatory character, to be established by an international medical organiza-

tion, a code, instruction in which should be obligatory in all schools and faculties of medicine in all countries."

If the great organizations cited will give their cooperation to this generous work, it will have favorable results for the medical profession in times of war, the rights and the duties of physicians then being clearly defined.

Correspondence

BLACK HAIRY TONGUE FOLLOWING USE OF PENICILLIN

To the Editor:—In a recent issue of THE JOURNAL (140: 1206 [Aug. 13] 1949) Dr. S. A. Wolfson directed attention to the condition known as black hairy tongue following the use of penicillin locally in the oral cavity. My co-workers and I have made some observations on the effects of penicillin administered in this manner which may be of intcrest. It has been found that the dark velvety tufts which develop on the tongue within several days, when the lozenges are taken, subsequently slough off with the continued use of penicillin. Penicillin in this form may be used effectively to promote desquamation of the long black filaments which characterize lingua nigra resulting from other causes.

This was first observed incidentally in a man, 39 years of age, who was confined to bed with residual rheumatic fever. The sedimentation rate had remained elevated for several weeks, while clinically the patient was much improved. He was a heavy smoker; oral hygiene was poor. Associated typical lingua nigra, which had been present for several years, was noted. In an attempt to allay any influence which poor oral hygiene might have on the sedimentation rate, a therapeutic trial of penicillin lozenges, 1,000 units three times a day was prescribed. After the lozenges had been taken daily for two weeks, the dark, heavy coating on the tongue desquamated in patches, leaving a red, smooth, slightly sensitive surface.

In a second case, in which the tongue was initially normal in appearance, penicillin inhalations were prescribed for persistent low grade pharyngitis (100,000 units were given four times daily). Brownish fur developed on the tongue on the second day. On the third day the inhalations were discontinued. The heavy coating sloughed off the following day. When last seen, nine days later, the tongue was still smooth and red. The patient did not complain of any discomfort.

The bald, slightly sensitive tongue which results from the desquamation of the hairy coating resembles the tongue as it has been described in certain vitamin B deficiencies. In one case, however, a typical smooth tongue developed in this manner while large doses of vitamin B complex were being administered parenterally. It is questionable, therefore, whether nutritional deficiency is concerned in this reaction of the lingual epithelium. The mechanism involved is not known.

Black tongue develops by an elongation of the tips of the filiform papillae. These are composed normally of short tufts of cornified cell material. Their length is determined by a balance between the rate at which desquamation takes place and the rate at which they are reformed. When they become elongated, either the rate at which the cornified material is formed has increased or that which is produced at a fixed rate remains adherent to the papilla for a longer time.

In promoting the development of black tongue, penicillin acts in some manner, therefore, either to increase the rate at which cornification takes place or to modify the texture of the cornified material formed at a fixed rate, so that it is more cohesive. The desquamation and relatively atrophic condition of the epithelium which follows the continued use of penicillin would appear to result from some entirely different mechanism.

An attempt to clarify the action of penicillin on cornification in simple stratified epithelia by the use of cytologic technics is now in progress in our laboratory. It has been found that the use of penicillin suppositories also influences cornification of the vaginal epithelium. In several cases investigated to date, a vaginal smear picture simulating that of hyperestrinism has been produced in this manner. With the continued use of penicillin an atrophic smear picture has subsequently developed. The production of a high cornification level in the vaginal smear with the topical application of penicillin indicates that hypercornification does not always reflect a high level of estrogen activity.

There is the suggestion, in the evidence accumulated to date, of the possibility that penicillin may directly influence the enzymes of the cells which are involved in the cornification process. A detailed report of these studies is now being prepared for publication.

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TONSILLECTOMY DURING EPIDEMIC POLIOMYELITIS

To the Editor:—The editorial "Tonsillectomy During Epidemic Poliomyelitis," THE JOURNAL, June 4 (page 479), misquotes figures. It says in part:

"Cunning's report and other factual material relating to this question were recently reviewed by Faber. Data on 4,331 cases of poliomyelitis occurring in twenty-five states during 1947 which had been reported by Cunning were reexamined. Incidence of the bulbar type of poliomyelitis was noted to be 25 per cent in the group who had been subjected to tonsillectomy within two months of onset. Incidence of the bulbar type in the entire group was 11.7 per cent. Corresponding figures for 1946 showed an incidence of 29 per cent bulbar type of poliomyelitis among the post-tonsillectomy cases as compared with 15.4 per cent of the bulbar type in the entire group."

The figures mentioned, namely, 25 per cent as the incidence of the bulbar type of poliomyelitis in the group subjected to tonsillectomy within two months of the onset in 1947 and 29 per cent as the incidence of the bulbar type of poliomyelitis in the group subjected to tonsillectomy within two months of the onset in 1946, are correct. A review of the Cunning reports will reveal the 25 per cent should have been 1.2 per cent and the 29 per cent should have been 4.7 per cent. The editorial also failed to mention the 16,643 cases of tonsillectomy performed and carefully followed in fifteen different states throughout the country for a period of two months after operation, in none of which did bulbar poliomyelitis develop.

For four years the Committee for the Study of Poliomyelitis and Tonsillectomies of the American Laryngological, Rhinological and Otological Society, Inc., has honestly attempted to learn the truth concerning the relationship between poliomyelitis and tonsillectomies. This committee, a large number of the country's leading epidemiologists and many local health authorities agree on two main points: (1) Tonsillectomies and adenoidectomies or any other elective operation should not be performed in a community where poliomyelitis (or any other contagious disease) assumes epidemic proportions, and (2) tonsillectomies and adenoidectomies can with safety be performed in a community where poliomyelitis (or any other contagious disease) does not assume epidemic proportions.

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118 East 53rd Street, New York 22.

Bureau of Investigation

ASPIRIN PLUS FOR ARTHRITIS

The proprietary drugs "Dolcin" and "Imdrin" are currently being exploited as something new and different in the treatment of the various forms of rheumatism and arthritis.

The Dolcin firm uses the radio and has "detailed" the medical profession by mail. The people handling "Imdrin" seem to prefer full page spreads in newspapers from coast to coast. Both apparently are enjoying a successful business.

The promotion for "Dolcin" features a report in the *Ohio State Medical Journal* for October 1947.[1] This was abstracted in THE JOURNAL.[2] A correction on dosages appeared in a later issue.[3] Dolcin had been on the market for approximately a year before the appearance of this report. Wide distribution of a reprint to members of the medical profession followed. Accompanying it was a cover letter, the second paragraph of which read:

> Published in the October 1947 issue of the *Ohio State Journal of Medicine*, this study, by M. M. Szucs, M.D., *covers the results of 396 cases of several forms of arthritis treated with Dolcin.* [Italics ours. —Ed.]

The volume of inquiries prompted a letter to Dr. Szucs for details. He replied:

> . . . I wish to state that I was not aware and emphatically do not approve of the action of the Dolcin Corporation and the promotion of their drug as a cure-all for arthritis and rheumatism. As stated in my article published in the October issue of the *Ohio State Medical Journal*, I used the Dolcin preparation in the early stages of my experiments; but due to undesirable reactions which I obtained in some cases, changed my formula several times. Dolcin was used on an estimated ten (10) cases of the total 396 cases.

In a later letter explaining the undesirable reactions mentioned, he wrote:

> As stated in the article, there was a slight gastric upset experienced in some cases, but as this was noticed with calcium succinate as well as with succinic acid, I cannot definitely assert that it was due to the Dolcin preparation.

A seizure action under the Federal Food, Drug and Cosmetic Act of 1938 was recently terminated in a federal court in New Jersey. In response to a request for particulars, the Bureau was advised:

> In the seizure of "Dolcin Tablets," manufactured by the Dolcin Corporation, New York, New York, there was entered in the Federal District Court for New Jersey, on December 6, 1948, a decree of condemnation and forfeiture and order for destruction.
>
> Whether the adjudication should be technically described as arrived at through default or by consent is an open question. The decree states, "Claimant represents to the Court that the said product is now being marketed with changed labeling which does not bear the representations which were the basis of the instant action. Consequently, claimant believes that no useful purpose would be served by contesting this case and requests the Court's permission to withdraw its claim and answer. This request is hereby granted.
>
> The adjudication of this seizure should not be construed as indicating that the present labeling employed by the Dolcin Corporation has the sanction of the Food and Drug Administration.

A second federal seizure, alleging false and misleading therapeutic claims on the retail package, is now pending against a consignment of "Dolcin" found in New Jersey by Food and Drug agents.

The Federal Trade Commission, which has jurisdiction over advertising claims made by drug firms, has announced that a complaint has been filed against the Dolcin Corporation and its officer-directors, wherein is charged false and misleading advertising of "Dolcin." The complaint alleges that the effect of the drug is "limited to temporary and partial relief of minor aches and pains and fever." It is further alleged that the only therapeutically active ingredient of the product is aspirin. The firm has an opportunity to file an answer to these charges.

In July 1949 an English investigator[4] reported on his experience with a tablet made up for the purposes of study, providing a daily dosage of 45 grains (3 Gm.) of acetylsalicylic acid and 35 grains (2.3 Gm.) of calcium succinate. The English investigator notes that in his cases the occurrence of dyspepsia was greater than that reported by Szucs. He commented: "Unfortunately, it was found in practice that the full dose could not be tolerated by a large number of patients owing to the development of dyspepsia of varying severity." He concluded:

> The final clinical impression was that the administration of the salicylate/succinate compound was a useful adjuvant to treatment. No opinion could be expressed with regard to its superiority over acetylsalicylic acid in comparable dosage.

"Imdrin" is the other scientific wonder now being advertised as a specific for rheumatism and arthritis. Full page spreads refer to an "Amazing New Discovery for Rheumatism, Arthritis—No Faster Pain Relief Known . . . Safe . . . Hospital Tested—Stops Swelling . . . Uncorks Joints . . . Contains Sensational New Research Discovery."

In the advertisement the product's being "hospital tested" is expanded below the picture of a laboratory worker surrounded by the tools of his profession. It is stated:

> . . . Yes, medical men, after three years of extensive hospital tests, have proved conclusively Imdrin works internally toward amazing reduction of pain, heat, redness, and swelling of the joints. Patients undergoing Imdrin therapy in these hospital clinics often were able to resume comfortable living completely, after other remedies had failed . . .

Elsewhere it is stated:

> . . . Medical science developed the amazing wonder-working drugs Sulfa and Penicillin . . . then turned attention to relieving the agonizing pains caused by rheumatism and arthritis. The result of extensive research is a wonder-working ingredient which is now combined with other pharmaceuticals into a remarkable preparation called Imdrin. . . .

The Bureau asked the firm for details. More than a month later a reply was received, which read:

> In response to your queries, it may be indicated that the researches on the formulation in question were conducted by Dr. S. N. Blackberg of Chicago. This study was initiated at the Michael Reese Hospital and completed at the Mount Sinai Hospital of Chicago.

Apparently 57 patients were treated for periods ranging from one to forty-four weeks with what was called "Manganese Salicylate Formulation." Adjuvant therapy included physical therapy, corrective exercises, multiple vitamins, alpha tocopherol acetate, roentgen rays and ferrous sulfate. One patient was reported as improved after he had moved from damp basement living quarters.

Inquiry of Dr. Blackberg revealed this comment:

> . . . I have never heard of "Imdrin" and want to assure you that under no condition would I knowingly use, test or recommend a product which would be advertised to the laity for the treatment of arthritis . . . I am fully aware of the dangers of self-medication, especially in a disease or group of diseases such as the arthritides.
>
> About a year ago Dr. William Fishbein, City Epidemiologist and member of the Chicago Department of Health, asked me to test a product, the formula of which was as follows:
>
> Each tablet contains:
>
> | | |
> |---|---|
> | Thiamine hydrochloride | 1 mg. |
> | Acetyl salicylic acid | 150 mg. |
> | Manganese salicylate | 150 mg. |
> | Caffeine | 10 mg. |
>
> This product was called "Mancylate" and was to be promoted only through ethical channels to the medical profession. In fact, I helped prepare a schedule for the promotion of Mancylate in three of the midwestern states. This schedule included local medical bulletins only. No mention was made of ever promoting this product to the consumer and as far as I know, it never has been advertised to the laity. I studied the product in more than 50 patients and specifically stated that the investigation would be for the purpose of determining the value of mancylate as an analgesic agent in the treatment of patients with arthritis and related diseases. I made it very clear that I would observe only its effect in so far as diminution of pain was concerned and that the investigation was not for the purpose of studying its effect on the course or progress of the disease. . . .

"Imdrin" first appeared on the market approximately three years ago. At that time it was called "Emdrin" and did contain the ingredients mentioned as forming the composition of "Mancylate." What prompted the manufacturer to change the name and add calcium succinate is difficult to determine. The Dolcin Corporation at this time appeared to be doing a land-office business, with its aspirin and calcium succinate.

In the fall of 1948 the advertising campaign for "Imdrin" was in full bloom. One enterprising druggist in Kansas City regarded the advertising as good display material. He used the copy in an attempt to increase sales. A Food and Drug inspector, however, took samples, which included photographs of the display, and the result was a federal seizure action now

1. Szucs, M. M.: Succinate-Salicylate Therapy in Arthritis, Ohio State Medical Journal 43:1035 (Oct.) 1947.
2. J. A. M. A. 135:1114 (Dec. 20) 1947.
3. J. A. M. A. 136:196 (Jan. 17) 1948.
4. Kennedy, A. P.: The Use of Calcium Succinate and Acetyl-Salicylic Acid in the Treatment of Rheumatic Disease, Rheumatism 5:96 (July) 1949.

pending in the federal court in Cincinnati. It is alleged in government pleading that the product will not accomplish the therapeutic benefits claimed for it in the advertising. The retail bottle merely describes the medication as "an aid in the relief of muscular aches and pains." In its pleading, also, the government charges the firm with failure to reveal on the label the fact that aspirin is an active ingredient.

"Imdrin," too, was recently accorded attention by the Federal Trade Commission. A complaint has been filed, alleging that this product is limited in its therapeutic benefit to temporary or partial relief of minor aches and pains and fever. The commission announced:

> Contrary to advertising claims for the product [Imdrin], the complaint continues, persons afflicted with rheumatic and similar ailments so severely as to interfere with their normal habits of life or their ability to carry on their regular occupations will not be enabled to resume such habits or occupations by taking Imdrin.
>
> Finally, the complaint characterizes as false and misleading the representation that Imdrin will correct any disturbance of the vital enzyme systems of the blood and bones to insure their adequate function.

The Commission announced, also, that the firm has twenty days in which to answer its charges.

In more recent years, label claims of cures have disappeared; prosecutions and seizures now apply to misbranding of the retail package and accompanying literature. However, there still is opportunity for deception by the use of appropriately chosen words. Physicians whose services are sought in the promotion of drug products should obtain information on the background of the firm, or they may find themselves described in "patent medicine" advertising as the scientific authority for medications claimed to be miraculous.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS. *Parts I and II*, Feb. 13-15. Centers where there are approved medical schools and five or more candidates. Exec. Sec., Mr. E. S. Elwood, 225 S. 15th Street, Philadelphia 2.

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF NEUROLOGICAL SURGERY: *Oral*, Chicago, June 3. Final date for filing applications is Jan. 1. Sec., Dr. W. J. German, 789 Howard Ave., New Haven.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, INC. *Written and Review of Case Histories, Part I*. Various Centers, Feb. 5. Final date for filing applications is Nov. 5. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh.

AMERICAN BOARD OF OPHTHALMOLOGY: Boston, April. Sec. Dr. Edwin B. Dunphy, 56 Ivie Rd., Cape Cottage, Maine.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY. *Part II*, New York City, Feb. 9-10. Sec. Treas., Dr. Harold A. Sofield, Room 1856, 122 S. Michigan Ave., Chicago.

AMERICAN BOARD OF PLASTIC SURGERY: Examinations are given in June and November of each year in the home town of applicants. Sec.-Treas., Dr. Louis T. Byars, 400 Metropolitan Bldg., St. Louis, Mo.

AMERICAN BOARD OF PROCTOLOGY: *Examination in Anorectal Surgery*, Philadelphia, Nov. 12. Sec.-Gen., Dr. Louis A. Buie, 102-110 Second Ave., S.W., Rochester, Minn.

AMERICAN BOARD OF SURGERY: *Written*, Various Centers, October 26. Sec., Dr. J. Stewart Rodman, 225 S. 15th St., Philadelphia.

AMERICAN BOARD OF UROLOGY: *Written*. Various Centers, Dec. 3. *Oral and Clinical*, Chicago, Feb. 11-15. Sec., Dr. Harry Culver, 7935 Sunnyside Road, Minneapolis 21.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: *Examination*. Montgomery, June 27-29. Sec., Dr. D. G. Gill, 519 Dexter Avenue, Montgomery.

ARKANSAS: * *Examination*. Little Rock, Nov. 3-4. Sec., Dr. Joe Verser, Harrisburg. *Eclectic*. Little Rock, Nov. 3. Sec., Dr. Clarence H. Young, 1415 Main St., Little Rock.

COLORADO: * Denver, Jan. 3-6. Sec., Dr. George H. Gillen, 831 Republic Building, Denver.

CONNECTICUT: * *Examination*. Hartford, Nov. 8-9. Secretary to the Board, Dr. Creighton Barker, 160 St. Ronan Street, New Haven. *Homoeopathic*. Derby, Nov. 8-9. Sec., Dr. Donald A. Davis, 38 Elizabeth St., Derby.

DELAWARE: *Examination*. Dover, Jan. 10-12. *Reciprocity*. Dover, Jan. 19. Sec., Dr. J. S. McDaniel, 229 State Street, Dover.

DISTRICT OF COLUMBIA: * *Examination*. Washington, Nov. 14-15. Sec., Dr. G. C. Ruhland, 4130 E. Municipal Bldg., Washington.

FLORIDA: * *Examination*. Jacksonville, Nov. 27-29. Sec., Dr. Frank D. Gray, 12 N. Rosalind Ave., Orlando.

GUAM: *Endorsement*. Agana, Last Friday of each month. Sec., Capt. C. K. Youngkin, Dept. of Public Health, Guam, % F.P.O., San Francisco.

IDAHO: Boise, Jan. 9. Exec. Sec., Mr. Armand L. Bird, 305 Sun Building, Boise.

INDIANA: *Examination*, Indianapolis, June. Sec., Dr. Paul R. Tindall, 1138 K. of P. Bldg., Indianapolis.

IOWA: * *Examination*. Des Moines, Dec. 5-7. *Reciprocity*, Des Moines, Oct. 3, Nov. 7, Dec. 5. Sec., Dr. M. A. Royal, 506 Fleming Bldg., Des Moines.

KANSAS: Topeka, Dec. 8-9. Sec., Dr. J. F. Hassig, 905 N. Seventh St., Kansas City.

KENTUCKY: Louisville, Dec. 12-14. Sec., Dr. Bruce Underwood, 620 South Third Street, Louisville 2.

LOUISIANA: New Orleans, Dec. 8-10. Sec., Dr. Roy B. Harrison, 1507 Hibernia Bank Building, New Orleans 12.

MAINE: Portland, Nov. 8-9. Sec., Dr. Adam P. Leighton, 192 State Street, Portland.

MARYLAND: *Examination*. Baltimore, Dec. 13-16. Sec., Dr. Lewis P. Gundry, 1215 Cathedral St., Baltimore 1. *Homeopathic, Examination*. Baltimore, Dec. 13-14. Sec., Dr. John A. Evans, 612 West 40th St., Baltimore.

MASSACHUSETTS: Boston, Nov. 15-18. Sec., Dr. George L. Schadt, 413 East State House, Boston.

MISSISSIPPI: *Reciprocity*. Jackson, December. Sec., Dr. Felix J. Underwood, State Board of Health, Jackson 113.

MISSOURI: *Examination*. Jefferson City, October 24-26. *Reciprocity*, Kansas City, October, 23. Exec. Sec., Mr. John A. Hailey, State Capitol Building, Jefferson City.

NEVADA: Carson City, Nov. 7. Sec., Dr. George H. Ross, 112 N. Curry St., Carson City.

NEW HAMPSHIRE: Concord, March 8-9. Sec., Dr. John S. Wheeler, 107 State House, Concord.

NORTH DAKOTA: *Examination*. Grand Forks, Jan. 4-6. *Reciprocity*. Jan. 7. Sec., Dr. C. J. Glaspel, Grafton.

OHIO: *Examination*. Columbus, Dec. 12-14. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OKLAHOMA: * *Examination*. Oklahoma City, June 7-8. Sec., Dr. Clinton Gallaher, 813 Braniff Building, Oklahoma City.

OREGON: * *Endorsement*, Portland, Nov. 4. *Written*, Portland, January. Exec. Sec., Mr. Howard I. Bobbitt, 608 Failing Building, Portland 4.

PENNSYLVANIA: *Examination*, Philadelphia or Harrisburg, January. Acting Sec., Mrs. Marguerite G. Steiner, 351 Education Building, Harrisburg.

PUERTO RICO: *Examination*. Santurce, March 7. Sec., Mr. Luis Cueto Coll, Box 3717, Santurce.

SOUTH CAROLINA: *Examination*, Columbia, Nov. 8-9. *Reciprocity*, First Monday of every month. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.

SOUTH DAKOTA: * Sioux Falls, Jan. 17. Sec., Dr. C. E. Sherwood, 300 First National Bank Building, Sioux Falls.

UTAH. *Examination*. Salt Lake City, June. Dir., Dr. Frank E. Lees, 324 State Capitol Building, Salt Lake City.

VIRGINIA: *Examination*, Richmond, Dec. 2-3. *Reciprocity*, Richmond, Dec. 1. Sec., Dr. K. D. Graves, 631 First St., S.W., Roanoke.

WASHINGTON: * Seattle, January. Director, Department of Licenses, Mr. Edward C. Dohm, Olympia.

WISCONSIN: * *Examination*. Madison, Jan. 10-12. Sec., Dr. C. A. Dawson, River Falls.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARIZONA: *Examination*. Tucson, Dec. 20. Sec., Mr. Francis A. Roy, Science Hall, University of Arizona, Tucson.

COLORADO: *Examination*. Denver, Dec. 7-8. Sec., Esther B. Starks, 1459 Ogden Street, Denver.

DISTRICT OF COLUMBIA: Washington, Oct. 24-25. Sec., Dr. G. C. Ruhland, 4130 E. Municipal Bldg., Washington.

FLORIDA: *Examination*, Gainesville, Nov. 5. Sec., Mr. M. W. Emmel, University of Florida, Gainesville.

NEW MEXICO: *Examination*, Santa Fe, Nov. 6. Sec., Miss Marguerite Kilkenny, 110 W. Houghton St., Santa Fe.

OKLAHOMA: *Examination*. Oklahoma City, April 11. Sec., Dr. Clinton Gallaher, 813 Braniff Building, Oklahoma City.

OREGON: Portland, Dec. 3. Sec., Mr. Charles D. Byrne, State Board of Higher Education, Eugene.

SOUTH DAKOTA: Vermillion, Dec. 2-3. Sec., Dr. Gregg M. Evans, 310 E. 15th St., Yankton.

TENNESSEE: *Examination*. Memphis, Dec. 30-31. Sec., Dr. O. W. Hyman, 874 Union Avenue, Memphis 3.

WASHINGTON: Seattle, January. Sec., Department of Licenses, Mr. Edward C. Dohm, Olympia.

WISCONSIN: Milwaukee, Dec. 3. Madison, April 1. Sec., Prof. W. H. Barber, Ripon College, Ripon.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1938 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American J. Digestive Diseases, Fort Wayne, Ind.

16:161-196 (May) 1949

Propeptan Therapy for Gastro-Intestinal Food Hypersensitivity. A. H. Price, F. Urbach, H. A. O'Neill and E. J. Tallant.—p. 161.
Presence of Anti-Rh Agglutinin in Commercially Available Medicinal Hog Gastric Mucin. R. D. Barnard, G. B. Gordon and H. Weltzner. —p. 172.
Dextrose, Insulin and Epinephrine Tolerance Tests in Cirrhosis of Liver. R. W. Hillman.—p. 174.
Unusual Case of Perforated Littre Femoral Hernia. J. A. Lazarus. —p. 180.
Newer Studies of Iron Ascorbate. S. L. Ruskin and A. T. Merrill. —p. 182.

American Journal of Medical Sciences, Philadelphia

217:593-720 (June) 1949

*Rapid Attainment of Therapeutic Penicillin Concentrations in Cerebrospinal Fluid. W. P. Boger and W. W. Wilson.—p. 593.
*Effective Penicillin Therapy in Subacute Bacterial Endocarditis and Other Chronic Infections. J. G. Schlichter, Helen MacLean and A. Milzer. —p. 600.
Pericardial Effusion: Constant, Early and Major Factor in Cardiac Syndrome of Hypothyroidism (Myxedema Heart). R. A. Kern, L. A. Soloff, W. J. Sampo and Carmen T. Bello.—p. 609.
Some Cardiological Problems of the Tropics. E. Garcia Carrillo.—p. 619.
Thiouracil Compared with Propylthiouracil in Treatment of Thyrotoxicosis. G. T. Kent, R. A. Shipley and K. D. Rundell.—p. 627.
Concentrated Roentgen Therapy of Cervical Tuberculous Lymphadenitis. I. Lampe, C. P. Chrest and D. A. Koch.—p. 632.
Transfusion of Arterial Hypertensive and Normotensive Blood into Hypertensive Subjects. M. L. Goldman, J. P. Kriss, P. H. Futcher and H. A. Schroeder.—p. 637.
Influence of Alcohol on Intravenous Galactose Tolerance Test. L. Greenman, J. S. Tiepping and J. D. Rosenbaum.—p. 644.
Certain Effects of Salt Poor Human Albumin in Cases of Hepatic Disease. C. J. Watson and A. Greenberg.—p. 651.
Prozone Phenomenon in Serodiagnosis of Syphilis: Clinical Study. Virginia P. Beelar, H. J. Zimmerman and B. Manchester.—p. 658.
Recovery from Uremia: Report of Five Cases. I. L. Leff, B. Rosenberg, W. Eisenmenger and J. M. Steele.—p. 666.
Occurrence of Herpes Zoster in Carcinoma of the Breast. E. P. Pendergrass and D. Kirsh.—p. 674.

Therapeutic Penicillin Concentrations.—Boger and Wilson administered 500,000 units of penicillin in aqueous solution by intravenous route to 21 patients with syphilis of the central nervous system who had uninflamed meninges. The intravenous route was employed in order to obtain a brief but high penicillin concentration in the plasma that might favor diffusion across the blood-brain barrier. Demonstrable concentrations of penicillin resulted in the cerebrospinal fluid within two hours. Three patients who failed to show diffusion of the antibiotic into the cerebrospinal fluid after the intravenous administration of 500,000 units showed measurable quantities of penicillin in the cerebrospinal fluid when carinamide was administered intravenously in conjunction with the same dose of penicillin. The observation that therapeutically significant levels of penicillin were attained in the cerebrospinal fluid in all of the patients studied suggests that the parenteral and particularly intravenous administration of penicillin has a place in the therapy of purulent meningitis and that intrathecal injection of penicillin is unnecessary in the majority of patients.

Penicillin in Subacute Bacterial Endocarditis.—Schlichter and co-workers assayed the bacteriostatic activity of the penicillin level in the blood serum by using the strains of alpha hemolytic streptococci isolated from 10 patients with subacute bacterial endocarditis during treatment with penicillin. By this method the minimal effective level is that concentration of assayable penicillin in the blood serum which can be shown to be completely bacteriostatic for the strain isolated. The authors believe that the optimal therapeutic level should be at least twice the minimal effective level, as shown by their direct test. Seven cases of septicemia due to hematogenous spread of alpha hemolytic streptococci and Staphylococcus aureus from foci of acute and chronic infection were selected for further investigation of the efficacy of this type of controlled therapy because of the relatively high initial sensitivity to penicillin of many strains of Staphylococcus aureus and the tendency for occasional strains to increase progressively in resistance when there was inadequate healing. Penicillin therapy in such cases should be based on maintenance of adequate serum levels as judged by the direct test for considerable periods of time. Unnecessarily high levels are not only economically wasteful but may possibly result in prolonging the duration of therapy by reducing the bactericidal rate of the strain involved. Planned therapy is a valid and effective basis for treatment of subacute bacterial endocarditis and chronic infections due to relatively resistant strains of susceptible organisms.

American Journal of Medicine, New York

6:535-680 (May) 1949

SYMPOSIUM ON POLIOMYELITIS

Epidemiology of Poliomyelitis in Light of Modern Research. H. A. Howe.—p. 537.
Viruses of Poliomyelitis. R. Ward.—p. 551.
Mechanism of Immunity in Poliomyelitis and Its Bearing on Differentiation of Types. I. M. Morgan.—p. 556.
Histopathologic Basis of Clinical Findings in Poliomyelitis. D. Bodian. —p. 563.
Problems of Pathologic Physiology of Poliomyelitis. F. Buchthal. —p. 579.
Clinical Aspects of Acute Poliomyelitis. D. M. Horstman.—p. 592.
Moist Heat in Treatment of Poliomyelitis. W. T. Green and T. Gucker. —p. 606.
Bulbar Poliomyelitis: Its Mechanism and Treatment. A. B. Baker. —p. 614.
Care of After Effects of Poliomyelitis. R. L. Bennett.—p. 620.
Public Health Considerations of Poliomyelitis. J. G. Malner.—p. 628.
Adrenal Medullary Tumor (Pheochromocytoma). F. N. Hatch, V. Richards and R. J. Spiegl.—p. 633.
Treatment of Pernicious Anemia with Crystalline Vitamin B12. R. West and E. H. Reimer Jr.—p. 643.

6:681-804 (June) 1949

*Modification of Effects of Immobilization upon Metabolic and Physiologic Functions of Normal Men by Use of Oscillating Bed. G. D. Whedon, J. E. Deitrick and E. Shorr.—p. 684.
*Effect of Vomiting Due to Intestinal Obstruction on Serum Potassium: Chemical and Electrocardiographic Observations in 15 Cases. Preliminary Report. S. Bellet, C. S. Nadler, P. C. Gazes and M. Lanning. —p. 712.
Hemodynamic Studies in 2 Cases of Wolff-Parkinson-White Syndrome with Paroxysmal AV Nodal Tachycardia. M. I. Ferrer, R. M. Harvey, H. M. Weiner, R. T. Cathcart and A. Cournand.—p. 725.
Studies on Coronary Circulation: V. Quantitative Changes in Serum Mucoprotein Following Occurrence of Myocardial Infarction. B. Simkin, H. C. Bergman and M. Prinzmetal.—p. 734.
Clinical Value of Serum Polysaccharide Determinations by Tryptophane-Perchloric Acid Reaction. H. L. Israel, M. B. Webster and I. E. Maher.—p. 745.
What Can We Learn from Medical History? C. Binger.—p. 751.
Fluorocardiography (Electrokymography). A. A. Luisada and F. G. Fleischner.—p. 756.

Modification of Effects of Immobilization by Oscillating Bed.—Whedon and associates investigated the ameliorating influence of an ingeniously contrived oscillating bed on the metabolic and physiologic effects of prolonged immobilization. Three healthy young men were studied on a constant dietary intake before, during and after a five week period of immobilization in plaster casts in oscillating beds. These 3 subjects had all taken part in the immobilization experiment (on standard hospital or fixed beds) previously reported. Data on nitrogen, calcium, phosphorus, total sulfur, sodium and potassium balances, together with other measurements of interest carried out under rigidly controlled conditions, are given in detail. The results indicate that the oscillating bed may be useful in the management of disorders involving protracted immobilization.

Low Serum Potassium in Intestinal Obstruction.—Bellet and associates discuss the effect of severe vomiting on the serum potassium level. The serum potassium was found to be low in 15 patients with protracted vomiting and decreased still further

after therapy with saline and dextrose solutions. That the depletion involved not only the serum potassium but the intracellular potassium is suggested by the small rise in serum concentration following injection of relatively large doses of potassium chloride. The electrocardiogram is a fairly good criterion of potassium deficiency and of considerable importance in the diagnosis of this condition. Administration of potassium resulted in clinical improvement in the patients so treated and in a return of the electrocardiogram to normal. Administration of this electrolyte in such states is important and in some patients may be life-saving.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

61:591-742 (May) 1949

Technics for Application of Betatron to Medical Therapy with Report of 1 Case. H. Quastler, G. D. Adams, G. M. Almy and others. —p. 591.
*Role of Nitrogen Mustard (HN_2) as Systemic Adjunct to Radiation Therapy of Certain Malignant Diseases. B. Roswit and G. Kaplan. —p. 626.
Studies on Respiratory Mechanics. F. Polgar.—p. 637.
Small Intestinal Pattern in Sprue and Similar Deficiency Diseases. A. Ettinger.—p. 658.
Double Gallbladder: Roentgenographic Demonstration of Case of "Y" Type; Classification of Accessory Gallbladder. A. P. Ingegno and J. B. D'Albora.—p. 671.
Co-Existent Benign Gastric Ulcer and Adenocarcinoma of Stomach. J. T. Brackin and J. M. Miller.—p. 677.
Adenocarcinoma of Jejunum: Report of 2 Cases. P. B. Parsons.—p. 680.
*Diagnosis of Spinal Meningiomas and Schwannomas by Myelography. E. H. Wood Jr.—p. 683.
Osteogenesis Imperfecta Tarda. L. Pelner and J. N. Cohen.—p. 690.
Roentgen Anatomy of Oblique Views of Lumbar Spine. L. E. Etter and N. C. Carabello.—p. 699.
Roentgenologic Recognition of Radiopaque Sponges. H. S. Weens and J. V. Rogers Jr.—p. 706.
Sterile Pyuria. K. C. Hardesty.—p. 711.

Nitrogen Mustard (HN_2) as Adjunct to Radiation Therapy.—Roswit and Kaplan say that although the treatment of malignant disease with the nitrogen mustard, methyl-bis (beta-chloroethyl) amine hydrochloride, is still in the investigative phase, it is already clear that treatment with the compound is purely palliative and not a cure. The drug should not be employed in early, localized Hodgkin's disease or lymphosarcoma. In these patients the best chance for survival is in rigorous local roentgen therapy. Nitrogen mustard therapy is not a substitute for roentgen irradiation in early generalized malignant lymphomas while they remain responsive to roentgen therapy. The authors found this corroborated in their experience in the radiation treatment of more than 700 such cases. Such patients may survive for several years with carefully planned, fractionated radiation therapy. Radioresistance is not encountered in these diseases until the malignant process is advanced. It is at this time that nitrogen mustard therapy is justified. The authors do not support the suggestion that this drug be employed as a maintenance measure in malignant lymphomas, including the chronic leukemias. The cumulative systemic intoxication thus induced leads to a hypoplastic or aplastic bone marrow and atrophy of the testes. The leukopenia, anemia and thrombopenia induced by nitrogen mustard may contraindicate the use of irradiation. The authors believe, however, that the agent is an indispensable systemic adjunct in the treatment of advanced, generalized malignant lymphomas at intervals when irradiation becomes ineffective or unfeasible. Nitrogen mustard is of aid in the treatment of inoperable bronchogenic carcinoma, but in other malignant disorders the compound is apparently ineffective. It is to be hoped that other nitrogen mustard derivatives will be found which will be much less toxic and far more effective.

Myelography in Spinal Meningiomas and Schwannomas.—Wood points out the myelographic abnormalities which suggest the presence of a meningioma or schwannoma (nerve sheath tumor) in the spinal intrathecal spaces. He reviewed 30 cases of intradural spinal meningiomas and nerve sheath tumors studied by radiopaque oil myelography. In each instance the tumor was removed surgically. The tumors were classified by microscopic examination of the specimen. Meningiomas and nerve sheath tumors occurred with almost equal frequency. There were 16 patients with tumors of meningeal origin and 14 patients with nerve sheath tumors. Partial or complete obstruction to the flow of contrast medium by the tumor occurred in every case. Each neoplasm produced a sharply demarcated filling defect in the radiopaque oil column indicative of an intrathecal tumor. In 28 patients displacement of the spinal cord on spinal nerve roots by the neoplasm was demonstrated in the myelogram. Displacement of these neural structures signifies that the lesion is extramedullary. A meningioma rather than a schwannoma may be suspected when the myelogram discloses a tumor with a broad dural attachment and slightly irregular surface. Nerve sheath tumors, being encapsulated, are surrounded by the radiopaque oil more thoroughly than are meningiomas. The preoperative differentiation of meningiomas from schwannomas is of greater academic than practical interest, because tumors of both types usually are amenable to complete surgical excision.

Annals of Internal Medicine, Lancaster, Pa.

30:895-1086 (May) 1949

Prothrombin Time in Dicumarol Therapy. F. C. Coleman.—p. 895.
Early Diagnosis of Carcinoma of Stomach. N. Bolker.—p. 903.
Facial Pain. C. J. McGee and W. D. Luxmore.—p. 914.
Periarteritis Nodosa—Possible Relation to Increased Usage of Sulfonamides. M. L. Gelfand and S. Aronoff.—p. 919.
Obstruction of Superior Vena Cava: Review of Literature and Report of 2 Personal Cases. F. T. McIntire and E. M. Suhes Jr.—p. 925.
Urinary Excretion of Creatine in Arthritis. L. W. Granirer.—p. 961.
Neurocirculatory Asthenia. W. M. Bartlett.—p. 966.
*Treatment of Malignant Disease with Nitrogen Mustard. N. B. Kurnick, K. R. Paley, M. H. Fieber and D. K. Adler.—p. 974.
Physiological and Biochemical Basis for Use of Vitamine E in Cardiovascular Disease. W. E. Shute, E. V. Shute and A. Vogelsang. —p. 1004.
Hepatitis Among American Occupation Troops in Germany: Follow-Up Study with Particular Reference to Interim Alcohol and Physical Activity. H. T. Gardner, R. A. Rovelstad, D. J. Moore and others. —p. 1009.
*Nocturnal Gastric Secretion in Patients with Benign Gastric Ulcer. E. Levin, J. B. Kirsner and W. L. Palmer.—p. 1020.
*Streptomycin Treatment of Bacterial Endocarditis Due to Streptococcus Viridans; Report of 2 Cases. C. F. Naegele.—p. 1049.

Nitrogen Mustard in Malignant Disease.—Kurnick and associates report observations on 64 patients who were treated with methyl-bis (beta-chlorethyl) amine hydrochloride (HN_2). Brief remissions were obtained in 20 of 24 patients with Hodgkin's disease, including several who had become roentgen resistant. In patients with carcinomas the tumors were uniformly unresponsive to the action of the drug (with two minor exceptions). Those with reticulum cell sarcoma and chronic lymphatic leukemia were only fleetingly benefited or failed to respond at all. One patient with chronic nonleukemic myelosis with splenomegaly and myelofibrosis improved dramatically. In lymphosarcoma and mycosis fungoides the response was variable, but the results were usually poor. In chronic myelogenous leukemia there was no response. The authors are of the opinion that in certain instances the nitrogen mustards have advantages over their physical counterpart, roentgen rays. In cases of widespread or inaccessible lymphomatous lesions, in which roentgen therapy is not feasible, the drug finds particular application. Fever due to lymphoma responds much more regularly and dramatically to chemotherapy. In moribund patients the more rapid and occasionally dramatic effect of nitrogen mustard therapy is advantageous. Constrictive lesions of the great vessels or the spinal cord often respond more rapidly to the chemical agent than to roentgen rays. The initial swelling of tumor tissue often seen following roentgen therapy has not been observed with nitrogen mustard. For the treatment of readily accessible or localized lesions the authors continue to regard roentgen irradiation as the treatment of choice. The toxic reactions observed were the same as those previously reported.

Nocturnal Gastric Secretion in Benign Gastric Ulcer.—Levin and associate report on the periodicity and variability of the nocturnal gastric secretion in patients with gastric ulcer and gastric carcinoma and compare them with these factors in normal persons and in patients with duodenal ulcer. The secretion of gastric juice in patients with benign gastric ulcer is apparently continuous, although the secretion of hydrochloric acid is not continuous. The volume of secretion and output of acid are usually higher during the first half of the night than during the last half. Individual variations exist. In the majority of instances, patients with a low volume and secretion of acid

in one night produce a low volume and acidity on successive nights; a similar constancy exists in patients with a high secretory rate. The rate of gastric secretion is not constant, varying spontaneously from hour to hour in the same person. The volume, concentration and output of acid in the fasting nocturnal gastric secretion are lower in patients with benign gastric ulcer than in patients with duodenal ulcer. There is no significant difference in the average volume secreted by patients with benign gastric ulcer and by normal persons. The concentration of free hydrochloric acid and output of acid are lower in patients with gastric ulcer.

Streptomycin in Endocarditis Due to Streptococci of the Viridans Group.—Naegele reports that streptomycin was successfully used in the treatment of 2 cases of bacterial endocarditis caused by typical streptococci of the viridans group. The causative organism was isolated in each case and determined to be relatively insensitive to penicillin in vitro but sensitive to concentrations of streptomycin that could be, and actually were, clinically attained. Follow-up study of 1 of the patients nineteen months after discharge from the hospital revealed that he had remained clinically well. Residual vestibular dysfunction had subsided.

Annals of Otol., Rhin. and Laryngology, St. Louis

58:1-318 (March) 1949

Antibiotics in Treatment of Diseases of Ear, Nose and Throat. A. C. Furstenberg.—p. 5.
*Diagnosis of Malignancy of Nasopharynx. Cytologic Studies by Smear Technic. L. F. Morrison, E. S. Hopp and R. Wu.—p. 18.
Relation Between Hearing Loss for Specific Frequencies and Distance at Which Speech Can Be Identified. E. T. Curry.—p. 33.
Tantalum in Rhinoplastic Surgery. S. L. Fox.—p. 60.
Vertebrated Magnets for Removal of Foreign Bodies from Air and Food Passages. C. Jackson and C. L. Jackson.—p. 55.
Anesthesia in Fenestration Surgery. J. H. Tucci.—p. 61.
Chondroma and Chondrosarcoma of Larynx. M. R. Link.—p. 70.
Physical Problems in Conduction Deafness. H. B. Perlman.—p. 86.
*Otologic Effects of Streptomycin Therapy. L. J. Wallner.—p. 111.
Amyloid Tumors of Larynx, Trachea or Bronchi: Report of 15 Cases. D. B. Stark and G. B. New.—p. 117.
Cancellous Bone Grafts in Nasal Repair. M. H. Cottle, R. M. Loring, M. H. Cohen and R. Kirschman.—p. 135.
Lateral Sinus Thrombosis: Review of Recent Literature and Report of Case. P. D. Lotella and J. H. Hopkins.—p. 147.
Angiosarcoma: Review of Literature. J. M. Kinkade.—p. 159.
Carcinoma of Antrum: Report of 9 Cases with Ten-Year Survey of Literature. C. A. Seelig.—p. 168.
Penicillin Aerosol Therapy in Sinusitis. F. J. Hynes.—p. 189.
Nasobronchial Cysts. J. R. Miller and P. M. Moore Jr.—p. 200.
Cysts of Nasal Vestibule. F. Montreuil.—p. 212.

The Smear Technic in Diagnosis of Malignant Disease of the Nasopharynx.—Morrison and associates are of the opinion that the difficulties involved in making an early diagnosis of malignant disease of the nasopharynx have been ascribed to the smallness of the initial lesion; to the fact that the condition is usually asymptomatic until metastases occur; to the fact that the first symptoms frequently are referred to some other structure, such as the neck, eye or ear; that the area is not as accessible for examination; to the great variations in the appearance of the islands or masses of lymphoid tissue in the nasopharynx that may be considered "within the limits of normal," and to the difficulty in obtaining satisfactory and representative biopsy specimens. In view of the excellent results obtained with the smear technic of Papanicolaou and Traut in the detection of cancer cells in various secretions, it was decided to use this technic in the diagnosis of exfoliative lesions of the nasopharynx. After reviewing the results obtained in 53 visible lesions of mouth, tonsils and larynx, the authors present their experiences in 85 cases in which nasopharyngeal smears were made. The results obtained with the smear technic were excellent, but it is not a substitute for biopsy. A positive smear makes it necessary to search for the source of the malignant cells. It is a time-consuming procedure that demands painstaking attention to detail. This is one reason why it will not become a routine laboratory procedure. Accurate diagnosis can only be made by a cytologist familiar with the area, but a well trained technician can screen out the unquestionably negative slides.

Otologic Effects of Streptomycin.—Wallner reviews the results of testing the cochlear and vestibular functions of 93 patients during treatment with streptomycin. They are divided into two groups on the basis of the dosage. The first group received 2 Gm. per twenty-four hours for four months; group II was given 1 Gm. daily. Audiograms and caloric tests were done before, during and after treatment. One patient with anuria suffered almost total loss of hearing, but no other patient was found to have any hearing loss from the drug. Of the 53 patients in group I, 42 noticed subjective symptoms of dizziness, staggering gait or visual disturbances and 25 had objective evidence of depressed or absent vestibular function. Of the 40 in group II, 18 complained of subjective symptoms and 13 had depressed or absent caloric responses. No return of function was noted later in those without response. They also continued to have subjective complaints, trouble in walking in the dark and dizziness, although these symptoms diminished. These patients were grateful for the improvement in their general condition and did not seem to feel that the vestibular disturbances were too high a price to pay for it.

Anesthesiology, New York

10:247-368 (May) 1949

Tensions of Oxygen and Ether Vapor During Use of Semi-Open, Air-Ether Method of Anesthesia. A. Faulconer Jr. and K. E. Latterell.—p. 247.
Attempts to Prolong and Intensify Spinal Anesthesia by Addition of Ephedrine, Neosynephrin or Epinephrine to Pontocaine-Glucose Solution. W. F. Sergent and R. D. Drippe.—p. 260.
Hypertonic-Glucose for Spinal Anesthesia: Results of Over 5,000 Clinical Administrations. D. A. Roman and J. Adriani.—p. 270.
Clinical Observations on Use of Amidones for Analgesia. B. H. Robbins.—p. 280.
Immediate Effects of Spinal Pontocaine Anesthesia on Blood Volume in Man. S. I. Guest, L. S. Mann and P. W. Searles.—p. 289.
Review of Anesthetic Procedures Employed in 1,016 Major Thoracic Operations for Pulmonary Tuberculosis: Complications and Sequelae. C. Grunwald and R. C. Sword.—p. 295.
Observations on Cyclopentane as Anesthetic Agent. R. W. Virtue.—p. 318.
*Fatal Massive Pulmonary Collapse During Spinal Anesthesia. I. M. Pallin and M. Goldman.—p. 325.
*Pharmacologic Actions of Intravenous Procaine as Analgesic Agent. R. M. Isenberger.—p. 343.
Postanesthesia Unit in Private Hospital. C. D. Anderson and E. M. Miller.—p. 351.

Fatal Pulmonary Collapse During Spinal Anesthesia.—Pallin and Goldman report 3 cases of fatal massive pulmonary collapse occurring during spinal anesthesia. The first concerned a man aged 59, the second a boy aged 13 and the third a primipara aged 19. At necropsy all 3 showed almost complete bilateral pulmonary atelectasis. Fatal massive pulmonary atelectasis can occur as a complication of spinal anesthesia without the escape of air into the pleural space. Infection, toxemia, high oxygen demand, severe emotional stress and paralysis of the lower thoracic and lumbar sympathetic nerves by spinal anesthesia produce an overactivity of the parasympathetic system which is accentuated by vagus-stimulating manipulations with consequent reflex collapse of the lungs and the circulatory system. In addition to the usual sympathomimetic drug it is thought that patients exhibiting these symptoms and signs should receive a parasympathetic depressant, atropine 1 to 0.6 mg. (1/60 to 1/100 grain), intravenously just before the administration of a spinal anesthetic agent. The authors prefer to avoid the induction of spinal anesthesia in patients manifesting these signs and symptoms, because the work of De Takats, Fenn and Jenkinson indicated experimentally that atropine in high dosage cannot protect the animal, and probably man, against massive pulmonary atelectasis in more than 60 per cent of cases. The authors regard spinal anesthesia as contraindicated whenever it is suspected that a strongly unbalanced autonomic nervous system is operative.

Intravenous Procaine as an Analgesic Agent.—Intravenous injection of procaine hydrochloride produces moderate analgesia, relief of pruritus and increased peripheral circulation in a variety of clinical conditions. The action, according to Isenberger, appears to be localized to the nerve and blood supply of the affected parts. The drug undergoes prompt hydrolysis with rapid disappearance from the blood stream, requiring intravenous infusion in low concentrations. There is some evidence that the metabolites, para-aminobenzoic acid and diethylaminoethanol, retain some of the activity of the injected procaine. Toxic reactions to intravenous procaine depend on

the total dose administered, the speed of injection and the concentration of the solution used. Individual idiosyncrasy is not uncommon. In the normal dog perception of pain is not appreciably depressed by maximum tolerated doses of procaine hydrochloride given intravenously. The analgesic, hypnotic and relaxing action of intravenous thiopental (pentothal®) and curare in the dog is reduced by the simultaneous injection of procaine.

Archives of Dermatology and Syphilology, Chicago

59:493-594 (May) 1949

Clinical Use of Antireticular Cytotoxic Serum in Dermatology: Preliminary Report. M. H. Samitz and C. Stritzler.—p. 493.
Factors in Amorphous Penicillin G Influencing Growth of Fungi: I. Effect on Elaboration of Trichophytin by Trichophyton Gypseum. S. M. Peck and K. K. Li.—p. 498.
Calcifying Epitheliома of Malherbe: Report of 15 Cases, with Comments on Its Differentiation from Calcified Epidermal Cyst and on Its Histogenesis. W. F. Lever and R. D. Griesemer.—p. 506.
Pseudo-Ophiasis and Sickle Cell Anemia. T. Cornbleet, H. C. Schorr and S. Barsky.—p. 519.
Relative Allergenicity of Standard and Supposedly Hypoallergenic Nail Polishes. E. Edelson.—p. 522.
Vogt-Koyanagi Syndrome: Report of Case. G. M. Lewis and B. M. Koplin.—p. 526.
Sturge-Weber Syndrome. S. M. Bluefarb.—p. 531.
*Pigmentary Disturbance Following Exposure to Monobenzyl Ether of Hydroquinone. E. T. Bernstein and P. M. Sachs.—p. 542.
Letterer-Siwe Disease. S. E. Sweitzer and C. W. Laymon.—p. 549.
Soap, and Soap as Vehicle for Medicaments. H. Sharlit.—p. 560.
Nodular Subepidermal Fibrosis (Dermatofibroma Versus Histiocytoma). P. L. Rentiers and H. Montgomery.—p. 568.
New Official Classification of Leprosy. O. Canizares.—p. 584.

Pigmentary Disturbance After Exposure to Monobenzyl Ether of Hydroquinone.—Bernstein and Sachs report the cases of 3 Negroes employed in the manufacture of rubber dolls and of a white man exposed to neoprene, a synthetic rubber-like plastic. Monobenzyl ether of hydroquinone was the antioxidant incorporated in the rubber to which these persons were exposed in handling the unfinished dolls or gloves. None of the patients had had an eruption or pigmentary disturbance preceding the disorder. In all cases negative reactions followed patch tests with substances to which the patients were exposed, including the rubber itself. Positive reactions were obtained with monobenzyl ether of hydroquinone. The 3 Negro patients exhibited depigmentation, but the white man had hyperpigmentation. Six other patients with similar involvement were seen in the course of a routine inspection of the manufacturing plant. The authors know of several patients with this dermatosis who are under the care of other physicians. This indicates the relatively high frequency of this dermatosis. Nonoccupational origins of this depigmentation include leukoderma of the axillas following the use of rubber shields and loss of pigment on the chin after contact with a rubber dam used in dental work. Elimination of contact with the rubber was followed by restoration of the pigment. Pigmentary changes may also involve the adnexa of the skin. One patient observed a loss of hair on the forearms, and another noted that the hair on the forearms changed to a lighter color.

Archives of Ophthalmology, Chicago

41:527-658 (May) 1949

*Persistence and Hyperplasia of Primary Vitreous; Retrolental Fibroplasia—Two Entities. A. B. Reese.—p. 527.
*Histopathologic Aspects of Retrolental Fibroplasia. B. A. Klien.—p. 553.
Divergence Insufficiency as Practical Problem. L. W. Oaks.—p. 562.
Early Photograph of von Helmholtz with Explanatory Letter. J. C. Ayh.—p. 570.
Production of Cataract in Rats by Beta-Tetralol and Other Derivatives of Naphthalene. O. G. Fitzhugh and W. H. Buschke.—p. 572.
Use of Antihistaminic Drugs in Control of Atropine Dermatitis and Conjunctivitis. F. B. Fralick and R. D. Kiess.—p. 583.
Choroidal Metastasis of Testicular Chorionic Epithelioma: Report of Case. G. K. Kambara.—p. 587.
Voluntary Dissociations of Accommodation and Convergence Faculty: Two Observations. C. K. Barnes.—p. 599.
Surgical Approach to Inferior Oblique Muscle. W. F. Johnson.—p. 607.
Studies of the Eye with Radiosodium Autographs. L. von Sallmann, T. C. Evans and B. Dillon.—p. 611.
Treatment of Pediculosis Ciliaris with Anticholinesterase Agents: Report of Case. D. G. Cogan and W. M. Grant.—p. 627.
Intravitreal Use of Streptomycin. R. E. Shoemaker.—p. 629.

Hyperplasia of Primary Vitreous.—Reese reports 202 cases of blindness in infants, 128 of which have occurred in the past three years. From the examination made with the patients under general anesthesia this blindness may be considered as due to two different conditions, "persistence and hyperplasia of primary vitreous" in about 10 per cent of the author's cases and "retrolental fibroplasia" in about 90 per cent of the cases. Hyperplasia of the vitreous usually occurs in full term infants, and it generally affects only one eye. Retrolental fibroplasia usually affects both eyes and is characteristically seen in premature infants. Both conditions have in common the persistence of the primary vitreous as the basic congenital lesion, but there is an important difference. In persistence and hyperplasia of the vitreous, the primary vitreous remains as a whole and the secondary vitreous forms. The primary vitreous occupies its normal position in a funnel-shaped fashion back of the lens; thus there has been merely a persistence of the primary vitreous with hyperplasia. In retrolental fibroplasia only a portion of the primary vitreous remains in the region of its base; this persistent primary vitreous is adherent to a portion of the inner layer of the optic cup. As the secondary vitreous forms, it tends to compress and isolate the primary vitreous. This occurs everywhere but in the region where the adhesions have taken place, and here the retina becomes detached. Eyes with hyperplastic vitreous have the potentiality of vision, because the retina is in situ and seems to contain all its cellular elements. Excision of tissue back of the lens was performed on 11 eyes with hyperplastic vitreous. In 3 cases there has been objective improvement in that the pupil has been sufficiently cleared to permit a view of the details of the fundus. An opinion regarding the visual results must be reserved because of the age of the patients. The operation was well tolerated, and no eye has been made worse. Complete failures resulted from surgical intervention on eyes with retrolental fibroplasia.

Retrolental Fibroplasia.—Klien reports the histologic changes in 3 eyes with retrolental fibroplasia in 3 premature infants aged 3½, 10 and 6½ months. Angioblastic overgrowth of the primary vitreous in response to some disturbance as yet unknown may occur at any stage of gestation after formation of the primary vitreous has started. Depending on this time element, the retina may be involved in various ways and different microscopic pictures of retrolental fibroplasia may be produced. In case 1, occurring in the primary vitreous before the 13 mm. stage, these angiomas by invading the retina prevented primary coaptation of the retina and formation of the secondary vitreous. An inflammatory lesion need not be assumed to explain the firm attachment between primary vitreous and retina in this case. Case 2 illustrates a different and apparently more frequently encountered type of retrolental fibroplasia in which the shreds of retina still adherent to the choroid indicate a true retinal detachment and not a failure of primary retinal coaptation, as in case 1. Once the full picture of retrolental fibroplasia has developed, hemangiomas may become lost within the shrinking fibrous tissue. The proliferated pigmented and nonpigmented epithelial cells of the ciliary body may be difficult to demonstrate in histologic preparations of tissue in long-standing cases of retrolental fibroplasia.

Archives of Physical Medicine, Chicago

30:263-356 (May) 1949. Partial Index

Functional Testing and Training in Physical Medicine. R. L. Bennett. —p. 263.
Functional Improvement Produced by Resistive Exercise of Quadriceps Muscles Affected by Poliomyelitis. E. M. Krussen Jr.—p. 271.
*Preliminary Report on Treatment of Anterior Poliomyelitis with Exercise and Curare. W. D. Paul and O. A. Couch Jr.—p. 277.
Kinesiologic Electromyography: III. Deltoid. L. J. Yamshon and W. Bierman.—p. 286.
Simple Pressure Gauge for Measured Palpation in Physical Diagnosis and Therapy. O. Steinbrocker.—p. 289.

Exercise and Curare in Anterior Poliomyelitis.—Paul and Couch deduce from animal experimentation that early muscle use is the best means of promoting recovery from peripheral nerve injury. The patients whom they treated were divided into three groups. In group 1, 21 patients received the routine Kenney treatment, including hot packs and tendon stimulation plus stretching. At the time of admission 7 patients of group 2 had varying degrees of stiffness but no paralysis. They were treated by stretching alone, without the use of curare or hot packs. These patients made a rapid and uneventful recovery. In group 3, 26 patients were treated with stretching and curare but received no hot packs. Eleven of these had

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pain and tightness but no paralysis, the other 15 had paralysis. The most important part of the early treatment is the use of exercise or stretching to relieve tightness and pain. When pain makes it impossible to carry out the desired range of motion administration of curare to the patient makes it possible. Those treated with hot packs and stretching required nine to one hundred and fifty days to overcome stiffness and pain. The patients with mild disease requiring only stretching were relieved in two to ten days. The group treated by stretching, aided by curare, was relieved of stiffness and pain in two to seventeen days, except for 2 patients who were not properly stretched. Curare was used only as an aid in carrying out the most important part of the treatment, physical therapy. Excessive doses of the drug may obliterate the resistance felt during stretching, and under these conditions stretching might result in muscle injury.

Blood, New York

4:403-696 (May) 1949. Partial Index

Chemistry and Functioning of Mammalian Erythrocyte. S. Granick. —p. 404.
Blood Carbonic Anhydrase Activity in Anemia, with Note on Polycythemia Vera. H. D. Lewis and M. D. Altschule.—p. 442.
Zinc Content of Whole Blood, Plasma, Leukocytes and Erythrocytes in Anemias. B. L. Vallee and J. G. Gibson II.—p. 455.
Heinz Body Phenomenon in Erythrocytes: Review. S. H. Webster. —p. 479.
Studies on Destruction of Red Blood Cells: V. Irreversibly Sickled Erythrocytes: Their Experimental Production in Vitro. Shu Chu Shen, E. M. Fleming and W. B. Castle.—p. 498.
Ovalocytosis Associated with Sickle Cell Trait. R. S. Fadem.—p. 505.
Blood and Bone Marrow in Patients with Cirrhosis of Liver. L. Berman, A. R. Axelrod, T. N. Horan and others.—p. 511.
Evaluation of Sternal Aspiration as Aid in Diagnosis of Malignant Lymphomata. T. Cooper and C. H. Wathins.—p. 534.
Bone Marrow Regeneration in Experimental Benzene Intoxication. B. Steinberg.—p. 550.
Glycogen in Human Blood Cells. R. P. Gibb and R. E. Stowell.—p. 569.
Histochemical Study of "Acid" and "Alkaline" Phosphatase Distribution in Normal Human Bone Marrow Smears. M. Rabinovitch and D. Andreucci.—p. 580.
Production of Charcot-Leyden Crystals from Eosinophils with Aerosol Ma. W. W. Ayres.—p. 595.
Eosinophilic Leukemia: Report of Case with Autopsy Confirmation; Review of Literature. T. S. Evans and R. R. Nesbit.—p. 603.
Megakaryocytes in Normal and in Thrombocytopenic Individuals, with Introduction of New System of Differential Count for Megakaryocytes. V. de la Fuente.—p. 614.
Platelet Thrombosis in Human Hemostasis: Histologic Study of Skin Wounds in Normal and Purpuric Individuals. H. D. Zucker.—p. 631.
Effect of Parenteral Injection of Epinephrin on Leukocyte Counts in Normal Subjects and in Patients with Addison's Disease. J. L. Gabrilove, M. Volterra, M. D. Jacobs and L. J. Soffer.—p. 646.
Studies of Blood Passed Through Artificial Kidney. N. K. M. de Leeuw and A. Blaustein.—p. 653.

Bulletin of Johns Hopkins Hospital, Baltimore

84:409-496 (May) 1949

Human Conjunctivitis Due to Newcastle Virus in the U. S. A. M. W. Freymann and F. B. Bang.—p. 409.
Tremor and Changes in Reflex Status Produced by DDT in Decerebrate, Decerebrate-Decerebellate and Spinal Animals. R. B. Bromiley and P. Bard.—p. 414.
Constant Degree of Anoxemia Obtained by Administration of Gas of Variable Oxygen Concentration. R. Pennoys, C. B. Thomas and R. L. McLean.—p. 430.
*Treatment of Acute Brucellosis with Aureomycin. M. S. Bryer, E. B. Schoenbach, R. M. Wood and P. H. Long.—p. 444.
Experimental Klebsiella Meningitis Treated with Intrathecal and Intramuscular Streptomycin. G. Zubrod.—p. 461.
*Prevention and Treatment of Motion Sickness: I. Seasickness. L. N. Gay and P. E. Carliner.—p. 470.

Aureomycin in Brucellosis.—Bryer and co-workers tested the sensitivity in vitro to aureomycin of multiple strains of Brucella, including Brucella abortus and Brucella suis. Results showed that these organisms are sensitive to the action of the antibiotic. Growth of eleven strains of Brucella were completely inhibited by 0.25 to 2.0 micrograms of aureomycin per cubic centimeter of medium after forty-eight to seventy-two hours of incubation. Five male patients between the ages of 37 and 53 with blood cultures positive for Brucella organisms were treated with aureomycin. In all but 1 patient, the initial treatment consisted of 2,400 to 3,000 mg. of the drug by mouth. Supplemental intramuscular injections of 40 mg. of aureomycin every six hours were given to 4 patients. The total dose of the antibiotic varied from 6.7 to 35.25 Gm. Treatment was continued experimentally for approximately two weeks, and the dosage was usually reduced when the patient became afebrile. The laboratory and clinical observations in these cases suggest that aureomycin is an effective chemotherapeutic agent in this disease. All patients became afebrile and were improved within forty-eight to seventy-two hours after the start of treatment. When palpable, the liver and spleen receded during treatment, and further evidence of active disease was not observed. Relapses did not occur during follow-up periods of two to eight months. The only toxic reaction associated with oral administration of aureomycin was occasional, transient nausea. This was relieved by aluminum hydroxide preparations. The intramuscular injection of the drug, even when dissolved in 1.0 per cent procaine hydrochloride, produced local pain.

Prevention and Treatment of Seasickness.—Gay and Carliner studied seasickness in 1,366 soldiers carried from New York to Bremerhaven on a 13,000 ton Army transport ship. The voyage began on Nov. 27, 1948 and terminated after a rough passage on December 7. Four compartments 3E, 3F, 4E and 4F were set aside for the study of 485 men assigned to these compartments and subjected to the same motion of the sea. Half the men were given dramamine® (beta-dimethylaminoethyl benzohydryl ether 8-chlorotheophyllinate) or a placebo at the time of the departure from New York harbor; the other half were given dramamine® or a placebo two to twelve hours after the onset of symptoms of seasickness. Adequate control groups were given a placebo. The dose of dramamine® was 100 mg. every five hours and before retiring. The drug prevented seasickness in all but 2 men of 134 who occupied compartment 3E; the placebo failed to relieve the symptoms in all controls who experienced true seasickness in compartment 3F. This control group of 34 men obtained complete relief of symptoms within one hour after the first dose of dramamine® was administered. The drug gave complete relief to 14 men in compartment 4E who had symptoms three or more hours after the transport left New York. A placebo failed to relieve 14 men in compartment 4F, but these men obtained complete relief one-half hour after dramamine® was substituted for the placebo. Nineteen men who experienced symptoms three or more hours after the transport left New York recovered while receiving a placebo. These men required no medication during the last seven days of the voyage. Among 881 men who occupied other compartments of the ship, 195 had severe seasickness. Of these 187 derived complete relief one-half hour after the administration of dramamine.® During the ten days' voyage dramamine® was given to 389 patients with seasickness. Of these, 372 were completely relieved within one hour after the first dose of 100 mg. of the drug. Seventeen patients derived only partial or no relief. Results suggest that dramamine® is a powerful, nontoxic, prophylactic and therapeutic drug which can be used to control the symptoms of seasickness. The drug may be taken by mouth or may be administered rectally. No untoward side effects were noted with the standard dose of 400 mg. in twenty-four hours.

Bulletin New York Academy of Medicine, New York

25:271-332 (May) 1949

Advances in Treatment of Malignant Disease. C. P. Rhoads.—p. 271.
Results of Operations for Hyperparathyroidism. W. B. Parsons.—p. 285.
Therapeutic Role of Procaine and Its Derivatives. E. A. Rovenstine and E. M. Papper.—p. 298.
Treatment of Bell's and Other Palsies. W. Bierman.—p. 307.
Recent Advances in Domain of Anti-Histamine Substances: Phenothiazine Derivatives. B. N. Halpern.—p. 323.

25:333-400 (June) 1949. Partial Index

*Topectomy: Surgical Indications and Results. J. L. Pool, R. G. Heath and J. J. Weber.—p. 335.
Therapy of Asthma with Reference to Its Psychodynamic Pharmacology. H. A. Abramson.—p. 345.
Medicine Under Mussolini. M. Volterra.—p. 364.

Topectomy.—Pool and co-workers performed topectomy involving bilateral removal of the rostromedial portion of each frontal lobe, believed grossly to represent the approximate region of Brodmann's areas 9 and 10, on 54 mental patients, 36 with schizophrenia and 18 with other mental disturbances such as obsessive-compulsive neurosis and depressions that do not respond to the usual types of treatment. Good results were obtained in 7 schizophrenic patients. Significant improvement resulted in 2 patients with involutional depression, 3 with

obsessive-compulsive neurosis and 2 in the manic-depressed state. Of these 14 patients the wage earners are back at work, one as an accountant, another as a business man and others as secretaries and writers. Others are at home and capable of doing housework but not of earning their living. Twenty-three patients manifested some improvement and 17 showed no improvement. The obsessive-compulsive states and certain forms of depression profit most by topectomy. The deteriorated and deeply regressed schizophrenic subject and the psychopathic person apparently profit the least. Results compared favorably with those of lobotomy, and there were few of the personality disturbances that may follow prefrontal lobotomy. Postoperative complications of topectomy included temporary incontinence in about one third of the cases. Convulsive seizures occurred in 5 patients, all controlled by appropriate medication; 2 patients with postoperative hematoma were successfully treated, and 1 patient with peripheral neuritis improved by appropriate treatment. The operative mortality rate has been zero. Removal of about 30 Gm. of cortex from each frontal lobe seems to be the average effective measure. A quantitative factor is important in frontal lobe operations of this type. The qualitative or anatomic factor is also important; interruption of the thalamocortical projections seems to be vital in reducing the anxiety underlying mental states.

California Medicine, San Francisco

70:379-444 (May) 1949

*Blood Transfusions and the Rh Factor. P. G. Hattersley.—p. 379.
Head Retraction Reflex. R. Wartenberg.—p. 382.
Heart Disease as Complication of Pregnancy, with Emphasis on Indications for Recommending Therapeutic Abortion or Avoidance of Conception. J. J. Sampson.—p. 383.
Surgical Treatment of Patent Ductus Arteriosus. J. C. Jones.—p. 391.
Substernal Goiter and Pulmonary Emphysema. E. Phillips and S. A. Levine.—p. 394.
*Results of Medical and Surgical Management in Ten Cases of Congenital Megacolon. L. A. Yeazell and H. G. Bell.—p. 398.
Dysphasia of the Hip: Factor in Development of Static Osteoarthropathy. J. Levitin.—p. 401.
Clinical Application of Electrokymography. F. G. Gillick and W. F. Reynolds.—p. 407.
The Papanicolaou-Traut Method of Cancer Diagnosis: Its Use as Routine Pathologic Laboratory Procedure. S. Lindsay.—p. 413.
Contagious Ecthyma in Man. E. H. Gray.—p. 417.

Blood Transfusions and Rh Factor.—Hattersley reports that the first infant of a woman aged 25 was born at term and appeared normal but rapidly exhibited intense jaundice and died on the second day. A second pregnancy two years later resulted in a stillborn hydropic fetus. Laboratory tests showed that the patient's blood was group A, Rh negative, and the serum contained hyperimmune antibodies of Rh. Her husband was Rh positive. The history revealed that as a girl this woman had received a series of transfusions of blood for anemia. When Rh-negative persons are given transfusions of Rh-positive blood, more than 50 per cent are sensitized to the Rh factor. This case illustrates the fact that such sensitization of female children may be the cause of hemolytic disease in their offspring many years later. The second case reported by the author is that of an Army officer aged 48 who received his first transfusion when injured in the Philippines. Six months later he received from the blood bank 500 cc. of whole blood prior to surgical repair of his injuries. Due to a clerical error in the laboratory he had been recorded as Rh positive, although he actually had not been Rh-typed at all. The patient was transfused with blood from a group A, Rh-positive donor but did not present any immediate untoward reaction. The error was discovered two hours later, and it was determined that the patient was actually Rh negative. The patient's serum was brownish; it appeared to contain not only an increase in bilirubin but free hemoglobin. Rh-positive cells could not be found in the specimen. It appeared that the transfused cells had been completely hemolyzed. The only signs were hemoglobinuria, low grade jaundice, urobilinogenuria and a rising Rh antibody titer. The patient had been sensitized six months previously by the single transfusion. The dangers of Rh sensitization can be avoided by routine Rh-typing of all prospective recipients of blood, whether male or female, and by giving only Rh-negative blood to those who are Rh negative.

Congenital Megacolon.—After a thorough trial of medical management, Yeazell and Bell treated 10 of 20 patients with megacolon, 8 boys and 2 girls between the ages of 2 and 13 years, by either partial colectomy or resection of the entire colon down to the rectosigmoid junction. Follow-up for two to twelve years revealed that 5 of the 10 patients were 100 per cent relieved and 1 was 75 per cent relieved. Three were entirely well a few months after surgical intervention but have not been heard from since. The youngest patient, aged 2 years, died of peritonitis on the sixteenth postoperative day. In 4 of the patients on whom lumbar sympathectomy was performed this operative measure gave partial, temporary or no improvement. Of the 10 patients without operative treatment, several have been lost to follow-up; some are doing well on medical treatment, 1 died in early infancy and resection is being considered in 2. For children with congenital megacolon the authors recommend first a thorough trial of medical treatment, consisting of diet, vitamins, drugs and enemas. This should be started as soon as the diagnosis has been made, in an attempt to prevent the distention and hypertrophy of the bowel from progressing. If distention remains after a reasonable trial period and if the child is not gaining weight adequately, requires repeated hospitalization and is aged 3 years or more, then resection of the affected portion of the colon is indicated. The operative risk has been somewhat reduced with better supportive measures and chemotherapy. Since infants and extremely young children do not stand surgical operation on the colon as well as older children, the decision to operate should take into consideration the age of the patient.

Canadian Journal Public Health, Toronto

40:193-240 (May) 1949

*Wartime Diphtheria Experience in the Royal Canadian Air Force in Relation to Use of Diphtheria Toxoid. A. H. Sellers, G. D. Caldbrick and J. B. Hardie.—p. 193.
Pre-Marital Health Examinations in Saskatchewan: Problems and Results. H. S. Doyle.—p. 200.
Reorganization of the Health and Welfare Division of the Dominion Bureau of Statistics. R. Kohn.—p. 208.
Physical Rehabilitation of Injured Workmen in British Columbia. W. E. Milbrandt.—p. 216.

Diphtheria in Royal Canadian Air Force.—According to Sellers and co-workers the Royal Canadian Air Force introduced a generalized program of Schick testing and immunization of susceptible persons following an outbreak of diphtheria in 1941. They gave two 1 cc. doses of alum-precipitated diphtheria toxoid at an interval of four weeks. Approximately 50 per cent of all adult male personnel were found to be susceptible to diphtheria as judged by results of the Schick test. There were no serious reactions, and it was possible to carry out the program without interfering with military training. The diphtheria immunization program was effective. Outbreaks of diphtheria did not occur despite ample opportunity for infection. One hundred and two recorded cases of diphtheria or suspected diphtheria occurred among male Royal Canadian Air Force personnel during the period September 1941 to December 1945. Of these 102 cases, 16 occurred among men who had been posted overseas before the immunization program was in full operation. Of the remaining 86 cases which occurred after the Schick test and immunization with toxoid were required, 30 occurred in Schick-negative persons and 12 in persons who were Schick sensitive. 'In the remaining 44 cases the original Schick test was positive; of these, 39 had had two doses of toxoid, 2 had only one dose and 3 had not received toxoid because they had been posted overseas before the inoculation had been given. On the whole, the cases were mild. The incidence of diphtheria among Schick-positive persons who received two doses of the toxoid was almost the same as that among those whose original Schick test was negative. This is clear evidence of the relative efficacy of the use of two doses of alum-precipitated diphtheria toxoid; without inoculation the attack rate would have been many times as great among Schick-positive personnel. Additional evidence is presented to show that there is substantial loss of Schick immunity after one year. A diphtheria immunization program of two doses of alum-precipitated toxoid, three doses of plain toxoid or appropriate doses of any combined antigen, should be accompanied by provision for an annual reinforcing dose.

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Canadian J. of Research. Medical Sciences, Ottawa

27:59-158 (April) 1949. Partial Index

Partial Hepatectomy and Resistance to Burns; Variations of Ascorbic Acid and Weight of Adrenals. L. P. Dugal and A. DesMarais. —p. 59.
Lipids of Nervous System During in Vitro Degeneration. A. C. Johnson, A. R. McNabb and R. J. Rossiter.—p. 63.
Factors Affecting Auscultatory Measurement of Arterial Blood Pressures. A. E. Thomson and J. Doupe.—p. 72.
Effect of Amytal on Skeletal Muscle. B. E. Riedel and M. J. Huston. —p. 81.
Gastric Response of Man to Acid Test Meal. G. E. Bermak and J. Doupe.—p. 90.
Acetylcholine and Neuronal Activity. D. B. Tower and D. McEachern. —p. 105.
Content and Characterization of Cholinesterases in Human Cerebrospinal Fluids. D. B. Tower and D. McEachern.—p. 132.
Some Effects of Diisopropyl Fluorophosphate (DFP) and Fluoroacetate on Central Nervous System. A. Kelen and D. McEachern.—p. 146.

Cancer Research, Baltimore

9:257-320 (May) 1949

Sex Hormone Secretion by Tumors of Adrenal Cortex of Mice. M. J. Frantz and A. Kirschbaum.—p. 257.
Special Condition of Interphase Nucleus in Normal and Cancerous Cells. E. U. Green.—p. 267.
Development of Leiomyomas in Female Rats with Endocrine Imbalance. C. A. Pfeiffer.—p. 277.
Transplantable Mouse Lymphosarcoma T 86137 (MB) Studied In Vivo, In Vitro and at Autopsy. W. M. de Bruyn, R. Korteweg and E. K. van Waveren.—p. 282.
Human Sebum as Vehicle for Methylcholanthrene. A. Plaut and H. Sobel.—p. 294.
Effects of Phosphate Bond Energy on Nucleic Acid Stability in Tumor Homogenates. G. A. LePage.—p. 297.
Intraocular Transplantation of Malignant Lymphomas of Mouse, Dog and Man in Heterologous Species. C. C. Lushbaugh and P. E. Steiner.—p. 299.
Amino Acid Composition of Fibrosarcoma and Its Normal Homologous Tissue in the Rat. M. S. Dunn, E. R. Feaver and E. A. Murphy. —p. 306.
Glycolytic Enzyme Inhibitor Therapy in Human Malignant Neoplasia. M. M. Black, I. S. Kleiner and H. Bolker.—p. 314.

Journal of Neurosurgery, Springfield, Ill.

6:187-268 (May) 1949

Intrathecal Alcohol in Treatment of Spastic Paraplegia. I. S. Cooper and T. I. Hoen.—p. 187.
Extradural Cerebellar Hemorrhage: Review of Subject and Report of Case. F. M. Anderson.—p. 191.
Unilateral Hydrocephalus Resulting from Occlusion of Foramen of Monro: Complication of Radical Removal of Brain Abscess. E. Alexander Jr. and E. H. Botterell.—p. 197.
Further Studies on Treatment of Experimental Hydrocephalus: Attempts to Drain Cerebrospinal Fluid into Pleural Cavity and Thoracic Duct. F. C. Ingraham, R. A. Sears, R. P. Woods and O. T. Bailey.—p. 207.
Intracranial Aneurysms: I. Some Clinical Observations Concerning Their Development. R. C. Bassett.—p. 216.
Role of Complete Cerebral Angiography in Neurosurgery. R. Raney, A. A. Raney and J. M. Sanchez-Perez.—p. 222.
New Operation for Treatment of Communicating Hydrocephalus: Report of Case Secondary to Generalized Meningitis. D. D. Matson.—p. 238.
*Actinomycotic Brain Abscess: Complete Excision with Recovery. R. C. Schneider and R. W. Rand.—p. 255.

Excision of Actinomycotic Brain Abscess.—Schneider and Rand report the case of a man, aged 45, with an actinomycotic abscess of the brain, of probable thoracogenic origin, which was treated successfully by surgical excision combined with antibiotic therapy. The patient received a total dosage of 60 Gm. sulfadiazine intravenously during the first ten postoperative days. The drug was then administered orally, 1 Gm. daily, a total dose of 258 Gm. Penicillin was administered intrathecally for the first four postoperative days in doses of 50,000 units daily. He also received 40,000 units parenterally every three hours, a total dosage of 4,440,000 units penicillin. After his transfer to another hospital an additional 1,920,000 units penicillin were given plus aerosol penicillin four times daily. It is possible that the communication of the abscess with the ventricular system, allowing the intrathecal penicillin to come in direct contact with the contaminated area, was an important factor in this case. Aerosol penicillin was of great value in diminishing the patient's profuse expectoration of tenacious sputum and may have favorably influenced the primary lung lesion. As long as the pulmonary focus remains, extension to other parts of the body may occur, and therefore a pulmonary lobectomy seems indicated.

Journal of Pediatrics, St. Louis

34:529-662 (May) 1949

Vitamin B12 Therapy in Megaloblastic Anemia of Infancy. A. Z. McPherson, U. Jonsson and R. W. Rundles.—p. 529.
Glycogen Disease of Liver with Report of Case. W. J. Matheson. —p. 537.
*Influence of Acute Infection upon Course of Allergy in Children: Some Clinical Observations. B. F. Feingold.—p. 545.
Hyaluronidase in Pediatrics. J. Schwartzman.—p. 559.
Associated Facial and Intracranial Hemangiomas. D. F. Downing and M. B. Kreidberg.—p. 564.
Cyanosis in Premature Infants Due to Aniline Dye Intoxication. B. M. Kagan, B. Mirman, J. Calvin and E. Lundeen.—p. 574.
Studies on Antibiotics in Cerebrospinal Fluid: I. Inhibitory Effect of Normal Cerebrospinal Fluid on Antibacterial Action of Streptomycin. R. G. Jordan Jr. and F. S. Hill.—p. 579.
Congenital Sarcoma. M. L. Dreyfuss.—p. 583.
*Cirrhosis of Liver in Children: Clinical and Pathologic Study of 40 Cases. P. D. Keller and W. L. Nute Jr.—p. 588.
Thephorin: Clinical Results in Allergic Children. S. J. Levin and S. S. Moss.—p. 616.

Influence of Acute Infection on Allergy.—According to Feingold an acute infection in an allergic child may produce one of two distinct types of pattern for his allergy, depending on the nature of the infection. The first pattern is observed in association with pertussis and the viral infections including measles, chickenpox, mumps, Kaposi's disease and epidemic virus infections. In these diseases the symptoms of allergy are aggravated during the period of invasion or the prodromal stage; at the peak of the illness the child's allergy is at a lower level than he ordinarily experiences; with convalescence there is a recrudescence of the allergy. The second pattern is observed in association with acute infections of the upper part of the respiratory tract. In these infections there is no apparent change in the allergy during the period of invasion, but at the height of the infection there is an aggravation of the allergy. As the infection subsides, the symptoms of allergy improve without any specific therapy directed toward the allergy. The group of diseases which produce the first pattern usually confer an active immunity after a single attack and their blood picture is that of leukopenia, with the exception of pertussis, which evokes lymphocytosis. The infections which produce the second pattern confer no immunity and call forth polymorphonuclear leukocytosis. The improvement in clinical allergy by the one group of infection and the aggravation of clinical allergy by the second type of infection may suggest some studies in immunology to explain the variation in the allergic response. Eleven illustrative cases of 7 boys and 4 girls, between the ages of 14 months and 10 years with eczema, asthma and allergic rhinitis are reported.

Cirrhosis of the Liver.—Among 82,866 admissions to the St. Louis Children's Hospital there was a total of 40 cases of cirrhosis, 31 confirmed by autopsy and 9 proved by laparotomy with biopsy of the liver. Cirrhosis in children is rare, but not so rare as has been supposed. Defined as a diffuse fibrosis of the liver it can be brought about in a variety of ways, some of which depend on inheritance and some on major derangement in some other organ system. Keller and Nute classified the disease in these 40 cases according to causes. There were 8 cases of obstructive biliary cirrhosis which is due almost always to congenital anatomic anomaly. Clinically it is distinguished by an obstructive jaundice in the newborn infant and pathologically by interlobar fibrosis, bile stasis and moderate inflammatory infiltration. Eleven patients had nodular cirrhosis, which develops in childhood rather than in infancy and is insidious in onset. Jaundice and hepatosplenomegaly are the most constant observations. The atrophic stage is rare. The liver shows extensive perilobular fibrosis, focal regeneration and mononuclear cell infiltration without bile stasis. Diffuse fibrosis of the liver, in addition to the usual clinical and pathologic findings, was observed as a rare sequela of erythroblastosis fetalis in 5 cases. Congestive cirrhosis is the result of repeated severe passive congestion of the liver that alternates with periods of relative compensation. Clinically it is overshadowed by the primary disease of the heart. Six cases of this type are reported. There was only 1 case of postnecrotic cirrhosis of the liver. A variety of toxins are capable of causing necrosis in the liver, which, if it is not too extensive, is followed by fibrotic repair. There seems to be nothing distinctive about this sequence as it

occurs in children. Two typical cases of hepatolenticular degeneration are described. So far as the liver is concerned, they are indistinguishable from ordinary nodular cirrhosis.

Kansas Medical Society Journal, Topeka

50:217-264 (May) 1949

Papanicolaou Test in Cancer Control Program. W. E. Brown, J. T. Bradbury and O. F. Kraushaar.—p. 217.
Cleft Lip and Cleft Palate Reconstruction: Manifold Problem. A. E. Hiebert.—p. 222.
Liver Function in Neuropsychiatric Patients as Determined by Hippuric Acid Test. T. L. Foster.—p. 226.
Report of Case of Ringworm of Scalp in an Adult. D. B. Morgan. —p. 231.

Michigan State Medical Society Journal, Lansing

48:409-520 (April) 1949

Michigan Cancer Detection Center Survey: Report by the Cancer Control Committee.—p. 441.
The Hillsdale Plan for Tumor Detection: Plan of Organization and Report of First Year's Experience. By Cancer Control Committee. —p. 445.
Carcinoma of the Breast. J. E. Cooper.—p. 449.
Radical Surgery for Advanced Pelvic Cancer. A. Brunschwig.—p. 451.
Attempts at the Chemotherapy of Cancer. S. P. Reimann and E. T. Nishimura.—p. 453.
Carcinoma of Upper Stomach and Thoracic Esophagus. A. Large, J. L. Posch and D. Dolese.—p. 458.
Radiation Effects on the Skin and Their Treatment. A. R. Woodburne and O. S. Philpott.—p. 461.
Skin Metastases as Evidence of Visceral Malignancy: Report of 2 Cases. K. M. Vander Velde.—p. 467.
Splenic Neutropenia Associated with Hodgkin's Disease. J. D. Kutsche. —p. 469.
Unusual Spinal Cord Tumors. C. F. List.—p. 471.
Solid Myoma of Uterus: Tumor Comprising Over One-Third of Body Weight. R. A. Stiefel and F. C. Cretsinger.—p. 478.
Treatment of Chronic Nonspecific Prostatitis. J. A. Winter.—p. 480.

Minnesota Medicine, St. Paul

32:449-568 (May) 1949

Proposals for Extension of Medical Care. H. M. Carryer.—p. 473.
Analysis of Electrocardiograms of Ninety-Three Patients with Acute Rheumatic Fever. B. F. Fuller and E. Young.—p. 482.
Skeletal Traction in Treatment of Traumatic Anterior Thoracic Instability. T. J. Kinsella and R. G. Bronson.—p. 486.
*Detection of Early Cancer of Cervix Uteri by the Papanicolaou Method: Analysis of 1,000 Consecutive Cases. K. Ikeda.—p. 488.
Factors in Diagnosis of Squint. V. L. Lindberg.—p. 492.
Perirectal Abscess Producing Symptoms of Generalized Peritonitis. W. C. Bernstein.—p. 496.

Detection of Early Cancer of Cervix Uteri—Ikeda examined 1,093 smears, 80 per cent cervical and 20 per cent vaginal, which were obtained from 1,000 female patients. Cancer cells were detected in 15 cases (1.5 per cent); the disease in 5 of these had been clinically diagnosed either as cancer or suspected cancer. The smear in 1 biopsy-proved case was negative. In the remaining 10 patients (1 per cent), between the ages of 30 to 64, cancer was unsuspected. All were married and multigravid except 1. The most common presenting complaint was intermittent or intermenstrual spotting or bleeding, followed in frequency by vaginal discharge. The cervices of these patients were free of a demonstrable lesion or showed only a minor erosion. The cervical smear seems to yield more positive results than the vaginal in a given series in the hands of the average examiner. Papanicolaou's cytologic method appears to be more sensitive in detecting early preclinical cancer of the cervix than does the conventional biopsy. A positive vaginal or cervical smear should never be ignored. It should be confirmed by one or more additional smears and by biopsy. A negative smear does not exclude cancer. Since the only guarantee for the cure of cancer of the cervix, at the present time, is its earliest possible recognition, since the cytologic technic has satisfactorily demonstrated its greater effectiveness in detecting early or preclinical cervical cancer than any other method known and since the routine biopsy in office practice is neither indicated nor practical, the Papanicolaou method of cytodiagnosis or any of its modifications may profitably be employed in the routine gynecologic practice to aid in the discovery of early cancer of the cervix uteri.

New England Journal of Medicine, Boston

240:703-746 (May 5) 1949

A Decade's Experience in Operation of Group Medical-Care Organization. S. Etkin.—p. 703.
Coarctation of Aorta Associated with Adams-Stokes Syndrome, Complete Heart Block and Bicuspid Calcareous Aortic Valve: Report of Case. R. J. Clark and H. I. Firminger.—p. 710.
Ballistocardiograms in Coarctation of Aorta: Observations Before and After Operation. H. R. Brown Jr., M. J. Hoffman and V. DeLalla Jr.—p. 715.
*Present-Day Status of Fenestration Surgery. L. F. Johnson and H. Silva.—p. 718.
Oral Surgery (Continued). K. H. Thoma.—p. 721.
Osteoid Osteoma of Femur.—p. 728.
Acute Bacterial Endocarditis of Mitral Valve.—p. 730.

Fenestration Surgery.—Johnson and Silva present a study of the results of fenestration surgical treatment, based on their ten years' experience at the Boston University School of Medicine and Massachusetts Memorial Hospitals, on observations made at various other clinics visited and on current literature. The selection of cases suitable for fenestration is an exacting responsibility. They outline the procedure that is followed at the Massachusetts Memorial Hospitals. A table lists the results of novovalis fenestration operations performed in 151 cases between 1942 and 1946. Practical hearing was obtained in 60 per cent of the cases and improved hearing in 26 per cent. In 13 per cent the preoperative hearing level remained, and hearing was worse in the remainder. Thus the likelihood that further impairment in hearing will result from operation is less than 1 per cent. The record of the last two years gives every promise of substantial improvement in the percentage of practical hearing, because of the improved fistula technic.

New York State Journal of Medicine, New York

49:1105-1232 (May 15) 1949

Histamine Iontophoresis in Therapy of Multiple Sclerosis. H. A. Abramson.—p. 1151.
Friedlander Bacillus Pneumonia Treated with Streptomycin. E. E. Benzier, J. Schwartz and M. A. Elias.—p. 1156.
Spa Therapy in Diseases of Skin. E. Neuwirth.—p. 1159.
Clinical Import of Blood Cholinesterase Determinations in Cholinergic Episodes and States in Human. C. Solomon, R. D. Barnard and H. G. Golan.—p. 1163.
Elusive Mental Cases: Indecision. B. Leber.—p. 1167.
Response to Intravenous Typhoid Vaccine in Intractable Status Asthmaticus. M. Fogel.—p. 1170.
Role of Bronchoscopy in Preoperative Diagnosis of Carcinoma of Lung. A. Lambert.—p. 1173.
Treatment of Menopause by Estradiol Pellet Implantation. M. V. Okie. —p. 1175.
Pleural Complications of Staphylococcus Pneumonia. P. H. Guilfoil. —p. 1177.
Treatment of Itching Dermatoses with Ointment Containing Two Per Cent Diphenhydramine (Benadryl Hydrochloride). A. J. Philip. —p. 1179.
Dissecting Aortic Aneurysms. M. Schlachman.—p. 1182.
Toxicity of Sodium Fluoride in Man. M. M. Black, I. S. Kleiner and H. Bolker.—p. 1187.
Nonspecific Reactions in Serologic Tests for Syphilis—Relationship of Vaccinia. V. N. Tompkins.—p. 1189.
Platelet Response to Vitamin B Complex in Newborn Period. L. S. Goldstein.—p. 1191.

North Carolina Medical Journal, Winston-Salem

10:229-292 (May) 1949

Selected Neuro-Ophthalmologic Disorders. H. C. Smith.—p. 230.
Cancer of Large Intestine: Diagnosis and Management. W. B. McCutcheon and R. D. Baxley.—p. 243.
Psychosomatic History Taking. A. C. Randolph.—p. 253.
Improved Autotransfusion. A. G. Brenizer Jr.—p. 257.
Sickle Cell Anemia Complicated by Valvular Heart Disease. G. E. Forbes.—p. 261.
Three Common Orthopedic Problems: De Quervain's Disease, Pulled Elbow, and Morton's Toe. A. T. Hamilton.—p. 267.
Adiposis Dolorosa: Report of Case. W. Spaeth.—p. 269.
Abdominal Pregnancy with Premature Separation of Placenta and Multiple Complications: Case Report. P. E. Simpson.—p. 273.

Physiological Reviews, Baltimore

29:91-194 (April) 1949

Neoplasia in Cold-Blooded Vertebrates. B. Luché and H. G. Schlumberger.—p. 91.
Transport of Ions Across Cellular Membranes. H. H. Ussing.—p. 127.
Development of Acute Tissue Damage Due to Cold. L. Kreyberg. —p. 156.
Reactions of British Anti-Lewisite with Arsenic and Other Metals in Living Systems. L. A. Stocken and R. H. S. Thompson.—p. 168.

Proc. of Staff. Meet. of Mayo Clinic, Rochester, Minn.

24:245-276 (May 11) 1949

Cytologic Diagnosis of Carcinoma of Esophagus and Cardia of Stomach. H. A. Andersen, J. R. McDonald and A. M. Olsen.—p. 245.
*Myocardial Infarction and Sudden Deaths Following Administration of Pitressin; Additional Electrocardiographic Study of 100 Patients Given Pitressin for Cholecystography. M. D. Mills, H. B. Burchell, R. L. Parker and B. R. Kirklin.—p. 254.
Evaluation of Hyperemia Test for Pregnancy as Routine Clinical Laboratory Procedure: Comparison of Results with Those of 1,000 Consecutive Friedman Tests. A. Albert.—p. 259.
Lymphoblastoma with Signs of Renal Involvement Improved by Roentgen Therapy. H. G. W. Jones, H. M. Odel and W. C. Popp.—p. 264.

Myocardial Infarction and Sudden Deaths Following Administration of Beta-Hypophamine (Pitressin®).—Mills and associates present 2 instances of prolonged myocardial ischemia, 1 of which proved fatal, and 2 sudden deaths in cases in which beta-hypophamine was given as an aid in clearing the upper part of the abdomen of gas to facilitate the interpretation of cholecystograms. Collins and Root made the first report in 1936 on the use of the drug to eliminate intestinal gas during cholecystography. These authors advised that its use be avoided in cases in which the systolic blood pressure is more than 150 mm. or less than 100 mm. of mercury and in cases of coronary sclerosis or cardiac decompensation. The episodes which occurred in the 4 cases pose the question as to the part beta-hypophamine played in the production of severe myocardial ischemia. The dose used for cholecystographic procedures was three-fourths that suggested by Ruskin for a diagnostic test for disease of the coronary arteries, and it was administered intramuscularly rather than intravenously. The authors decided to investigate whether electrocardiograms would show changes following the injection of beta-hypophamine. To evaluate this possibility, electrocardiograms were made in 100 cases before and fifteen minutes after the intramuscular injection of 1 cc. of beta-hypophamine containing 10 pressor units. In all of these cases, cholecystography had been requested, and the drug was administered with the approval of the consultant to facilitate this diagnostic procedure. Examination of the electrocardiograms either failed to disclose any change or revealed very slight changes. The mechanism through which the drug might initiate a severe coronary insufficiency and myocardial infarction is presumed to be a severe coronary vasoconstriction. The authors conclude that as a diagnostic adjunct it should be employed with the utmost discretion.

Proc. Soc. Exper. Biol. & Med., Utica, N. Y.

70:565-768 (April) 1949. Partial Index

Recovery of Psittacosis Virus from Chicks Hatched from Inoculated Eggs. D. J. Davis and J. E. Vogel.—p. 585.
Evaluation of Dubos' Solid Medium Containing Penicillin in Isolation of Tubercle Bacilli. J. W. Smith, J. Humiston, W. P. Creger and W. M. M. Kirby.—p. 589.
Effect of Alloxan Diabetes on Fertility and Gestation in the Rat. J. A. Sinden and B. B. Longwell.—p 607.
Differential Sheep Cell Agglutination Test in Rheumatoid Arthritis. E. Jawetz and E. V. Hook.—p. 650.
Destructive Action of Human Cancer Extracts on Red Blood Cells In Vitro. L. Gross.—p. 656.
Serum Level of Protein Bound Radioactive Iodine (I^{131}) in Diagnosis of Hyperthyroidism. A. S. Freedberg, A. Ureles and S. Hertz.—p. 679.
*Pathogenicity of Bagasse, II. Effect on Rabbits of Prolonged Exposure to Bagasse. B. Gerstl, M. Tager and L. W. Szczepaniak.—p. 697.
Complete Regression of Lymphosarcoma Implants Following Temporary Induction of Riboflavin Deficiency in Mice. H. C. Stoerk and G. A. Emerson.—p. 703.
Effect of Curare on Autonomic Reflexes. C. L. Burstein, A. Jackson and E. A. Rovenstine.—p. 718.
Use of Radiopotassium for Detection of Minute Amounts of Desoxycorticosterone. R. I. Dorfman.—p. 732.
Role of Spleen in Radiation Injury. L. O. Jacobson, E. K. Marks, E. O. Gaston and others.—p. 740.
Proteolytic Activity of Hemophilic Plasma. D. A. Richert.—p. 743.
Transfusion of Leukocytes and Products of Disintegrated Leukocytes. A. S. Weisberger, R. W. Heinle and R. Hannah.—p. 749.

Pathogenicity of Bagasse.—Gerstl and associates say that various factors have been suggested as etiologic agents of bagasse disease, such as the fiber itself, fungi and micro-organisms attached to the fiber and the high silica content. The authors describe experiments on rabbits. They found that the inorganic part of the inhaled bagasse dust produces a tissue reaction which is primarily a foreign body response. It is unlike silicosis and is amenable to healing by resolution. Superimposed on these lesions there occur in animals which are more susceptible to the causative micro-organisms acute bronchiolitic and pneumonic changes which, if sufficiently extensive, may cause death of the animal. A similar combination of etiologic factors seems to be the most plausible explanation of the complex picture of human bagasse disease.

Psychosomatic Medicine, New York

11:69-132 (March-April) 1949

Psychologic Tension and Serum Iodine Levels in Psychiatric Patients Without Evidence of Thyroid Disease. E. B. Brody.—p. 70.
Study of Pituitary-Adrenocortical Function in Normal and Psychotic Men. G. Pincus, H. Hoagland, H. Freeman and others.—p. 74.
Sex-Hormone Relationship in Schizophrenic Men. R. G. Hoskins and G. Pincus.—p. 102.
Use of Dream Analysis in Psychosomatic Research. T. M. French and L. B. Shapiro.—p. 110.
Relation Between Certain Finger Volume Changes, Electroencephalographically Manifested Brain Activity and Psychopathologic Reactions. W. T. Lhamon.—p. 113.
Mental Hygiene in General Hospital. O. Diethelm, C. Binger, H. E. Daniells and others.—p. 119.
Psychogenic Sneezing and Yawning. H. H. Shilkret.—p. 127.

Public Health Reports, Washington, D. C.

64:589-620 (May 13) 1949

*Pertussis and Aureomycin. J. A. Bell, M. Pittman and B. J. Olson.—p. 589.
Simple and Efficient Transport Method for Gonorrheal Specimens. L. R. Prizer, G. I. Steffen and S. Klein.—p. 599.
Diarrheal Disease Control Studies: II. Conical Net for Collecting Flies. P. P. Maier and R. P. Dow.—p. 604.

64:621-656 (May 20) 1949

Current Organization Patterns of Statistical Activities in State Health Departments. D. D. Swinney.—p. 621.
Sickness Absenteeism Among Industrial Workers: Third and Fourth Quarters of 1948. W. M. Gafafer.—p. 641.

Pertussis and Aureomycin.—Bell and associates state that aureomycin hydrochloride given to mice subcutaneously in nontoxic doses not only delayed the time of death but also prevented deaths due to prior intracerebral infection with Hemophilus pertussis. Small doses of the drug given at twelve hour intervals over a period of eight days were more effective than large doses given over a short period. Preliminary clinical trials in 20 cases of pertussis when compared with 380 cases of untreated disease suggest that aureomycin given orally shortens the clinical course of the disease. In only a few, particularly those with early treatment, was the clinical response to aureomycin considered dramatic in the sense that complete recovery immediately followed a few days of treatment. A prompt but gradual diminution in the frequency and intensity of paroxysms was observed in practically all cases. Some difficulty was encountered in ascertaining that specified amounts of the drug were retained by young children with pertussis. No untoward effects resulted from treatment. Aureomycin hydrochloride is effective for treatment of H. pertussis infection in mice and looks promising for treatment of the human disease. Further clinical trials are necessary to establish its value for general treatment of clinical pertussis.

Southern Surgeon, Atlanta, Ga.

15:205-290 (April) 1949

Intracranial Aneurysms. R. Jaeger.—p. 205.
Some Effects of Operation, Anesthesia and Composition of Parenteral Fluids upon Excretion of Water and Salt. C. A. Moyer, F. A. Coller, V. Iob and others.—p. 218.
Surgical Treatment of Malignant Lesions of Colon Complicated by Inflammatory Reaction, Fixation or Obstruction. C. J. Hunt.—p. 248.
Management of Hemothorax. J. A. Moore.—p. 255.
Surgical Management of Cancer of Lower Bowel Without Colostomy. H. E. Bacon and G. D. Vaughan.—p. 270.
Treatment of Some Common Rectal Conditions. J. F. Robertson and C. P. Graham.—p. 283.

15:291-374 (May) 1949

Factors Influencing Selection of Operation for Carcinoma of Lower Portion of Colon and Rectum. C. W. Mayo.—p. 291.
Tumors of Neck. S. F. Marshall and W. F. Becker.—p. 300.
Melanoma. V. H. Price, C. D. Knight and W. R. Mathews.—p. 316.
Plastic Procedures for the General Surgeon. C. C. Trabue.—p. 332.
Cancer of Cervix as Seen in Rural Community. W. H. Cave.—p. 332.
Plastic Repair of Injuries to Male Genitalia. W. G. Hamm and F. F. Kanthak.—p. 339.
Management of Cranial Cerebral Injuries. F. Jelsma.—p. 346.
Incorrect Knot-Tying, Cause for Broken Sutures. S. V. Ward.—p. 354.
Vascular Accidents of Extremities. K. D. Grace.—p. 359.

Southwestern Medicine, El Paso, Texas

29:85-104 (May) 1949

Use of Antibiotics in Surgery. J. E. Rhoads.—p. 88.
Treatment of Facial Lacerations and Diagnosis of Underlying Pathology. W. W. Schuessler and D. N. Steffanoff.—p. 94.

Surgery, St. Louis

25:655-814 (May) 1949

Healing of Wound as Biologic Phenomenon. S. C. Harvey.—p. 655.
*Evaluation of Mixtures of Ossein Gelatin, Hydrolyzed Protein and Glucose in Parenteral Nutrition of Postoperative Patients. C. Riegel, C. E. Koop, C. W. Schwegman and others.—p. 672.
Studies on Burns: III. Effect of Heparin on Circulating Blood Plasma and Proteins in Experimental Burns. E. M. Alrich.—p. 676.
Study of Vehicles and Adjuvants for Sulfonamides and Penicillin. E. J. Pulaski.—p. 681.
*Massive Penicillin Therapy of Abdominal Actinomycosis. G. E. Sanford and R. O. Barnes.—p. 711.
Effect of Temporary Renal Vascular Occlusion on Kidney Function. J. R. Scheibe, E. Giraldi and C. W. Vermeulen.—p. 724.
Dislocations and Fracture-Dislocations of Foot: Transfixion with Kirschner Wires. E. O. Geckeler.—p. 730.
Appendical Calculi: Incidence and Clinical Significance. B. Felson.—p. 734.
Gelatin Sponge in Cardiac Valvulotomy: Report of 2 Cases. J. M. Stallworth and H. G. Smithy.—p. 738.

Ossein Gelatin, Hydrolyzed Protein and Dextrose in Parenteral Nutrition.—Riegel and co-workers point out that ossein gelatin was developed during World War II as a plasma substitute and proved to be remarkably free from toxic or antigenic properties. Although it is one of the few plasma substitutes with nutritional value, it has long been recognized to be an incomplete protein. Its use in conjunction with a hydrolyzed complete protein has been suggested. The authors performed nitrogen balance studies on two groups of 10 patients each, during five day periods following major operative procedures. Both groups were given all their nourishment intravenously, and each patient received approximately 30 calories per kilogram per day and 0.3 Gm. of nitrogen per kilogram per day. Casein or fibrin hydrolysates provided all the nitrogen for the first group, and the average daily nitrogen balance was minus 2.85 Gm. In the second group ossein gelatin was substituted for one-half the hydrolysate, and the average daily nitrogen balance was minus 0.2 Gm. The first group was also compared with 8 patients who received a comparable ration enterally and had an average daily nitrogen balance of plus 0.35 Gm. No difference in efficacy was observed between casein hydrolysate and fibrin hydrolysate in this series. The use of macromolecular gelatin for a part of the nitrogen ration makes possible the use of a solution which is somewhat less hypertonic than is otherwise necessary.

Massive Penicillin Therapy of Abdominal Actinomycosis.—Sanford and Barnes point out that the course of events in 2 cases of severe abdominal actinomycosis indicates that infections of this type may not respond to penicillin therapy in rather large doses (800,000 units a day), sulfonamide drugs, adequate surgical treatment and supportive therapy. These 2 patients received this therapy for eight and nine months, but temporary improvement was followed by progression of the disease. It was then that really massive penicillin therapy was instituted. One patient was given in the course of sixty-seven days 644,480,000 units of penicillin and 156 Gm. of sulfadiazine. The second patient was given in the course of forty-eight days 586,400,000 units of penicillin. Five hundred thousand units of penicillin was given intramuscularly every three hours and 10,000,000 units in 1,000 cc. of isotonic sodium chloride solution was administered daily by slow intravenous drip. Administration of sulfadiazine was continued in doses of 6 Gm. a day. The response to this massive penicillin therapy was dramatic and cure resulted in both patients. The only change in the treatment of these patients was the administration of massive doses of penicillin. Consequently, one may state with certainty that massive penicillin therapy has been responsible for the cures. The apparent cure of an actinomycotic abscess is noteworthy when the high mortality reported for these cases is considered. There have been 11 reported cases with only 1 patient alive after one year, and he had recurrence of the disease. This report confirms the observations of others that massive doses of penicillin are not toxic even when given for relatively long periods. Follow-up studies on the 2 patients revealed cures of one year's duration. The perfect health of the patients indicates a permanent cure.

Texas State Journal of Medicine, Fort Worth

45:183-266 (April) 1949

Every Doctor's Office a Cancer Detection Center. G. V. Brindley.—p. 189.
Results of Treating Carcinoma of Stomach by Gastrectomy. W. Walters and J. Berkson.—p. 191.
Cancer of Rectum and Colon: Analysis of Private Cases, 1926-1946. H. T. Hayes and H. B. Burr.—p. 198.
Synovial Sarcoma and Relatively Benign Synovioma. E. E. Muirhead, L. J. Kreissl Jr. and C. E. Gordon.—p. 202.
Simple Method of Applying Vaginal Radium. I. C. Skinner.—p. 209.
Gastric Rugae. R. P. O'Bannon.—p. 210.

45:267-332 (May) 1949

Nutrition for the Expectant Newborn and Mother. W. F. Guerriero.—p. 274.
Left Sided Approach for Small Bowel Obstructions: Anatomic and Mechanical Improvement. J. P. Barnes.—p. 281.
Mass Photofluorography in Texas. H. E. Smith.—p. 286.
Cod Liver Oil Therapy of Tuberculous Empyema. R. J. Hanks.—p. 290.
Relapsing Tertian Malaria: Diagnosis and Therapy. R. A. Wise.—p. 295.

United States Naval Med. Bulletin, Washington, D. C.

49:407-616 (May-June) 1949. Partial Index

Sarcoidosis: Report of 6 Cases. I. L. Norman and W. Shoemaker.—p. 407.
Experiences with Marrow Nail Operation According to Principles of Kuentscher: Part I. C. Haebler.—p. 423.
*Vagus Neurectomy in Peptic Ulcer: Analyses of 60 Cases. F. H. Johnson and E. A. Kearney.—p. 475.
Chronic Nonspecific Jejunitis. R. B. Green.—p. 488.
Recurrent Acute Pancreatitis: Review of Literature and Report of Case. J. A. Dugger.—p. 498.
Psychiatric Uses of Sodium Pentothal: Experiences in a Forward Area. D. W. Orr.—p. 508.
Myocardial Infarction at the Age of 21: Report of Case. B. C. Jones Jr. and J. H. Strauch.—p. 517.
Syphilitic Osteoperiostitis—Skull, Ribs, and Phalanges: Report of Case. J. W. Metcalfe.—p. 528.
Repositioning of Mandible by Adjustment of Occlusion. S. K. Sarkin.—p. 542.
Primary Carcinoma of the Liver (Hepatoma). H. V. Hippensteel Jr.—p. 556.
Craniopharyngioma: Report of Case. E. N. Barnum.—p. 560.
Urachal Cysts and Sinuses: Discussion and Report of Case. J. J. Zarriello.—p. 567.
Prolapse of Male Genitalia in Frank Breech Presentation: Case Report. J. A. Millspaugh and O. G. Nix.—p. 571.
Angioid Streaks of the Retina: Case Report. A. J. Delaney and A. L. Rhoades.—p. 572.
Spontaneous Mediastinal Emphysema: Report of Case. J. Y. Bradfield and R. B. Shepardson.—p. 576.
Medical Care on Wartime Operating Submarines. I. F. Duff and C. W. Shilling.—p. 580.

Vagus Neurectomy in Peptic Ulcer.—Johnson and Kearney state that they were reluctant to try vagus neurectomy because they were convinced that partial gastrectomy was an excellent operation for the cure of both gastric and duodenal ulcers. They were aware of the difficulties and dangers that are encountered in attempting to resect a large penetrating ulcer of the posterior wall of the duodenum, i. e., possibility of injury to the common bile duct, of blown out duodenal stump, duodenal fistula and peritonitis. It was in just such a case that they performed a vagus neurectomy for the first time. The patient complained of pain for six years and had several episodes of bleeding. The pain had not responded to medical management. A large ulcer of the posterior wall of the duodenum, which had penetrated into the pancreas, was found at operation. Resection of the ulcer was considered dangerous, and rather than perform a gastrojejunostomy or a Finsterer type of partial resection they performed a vagus neurectomy. During the next six weeks this operation was performed on 4 or 5 poor risk patients. The results were so good that the authors were encouraged to extend the use of the procedure. They combined gastrojejunostomy with vagus neurectomy in a large percentage of cases. Of the 60 patients whom the authors treated by vagus neurectomy 2 died; in 46 the results were excellent, in 9 good and in 3 poor. Since the completion of this report, 23 additional patients were treated by vagus neurectomy with the same general results and no deaths.

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FOREIGN

An asterisk (*) before a title indicates that the article is abstracted. Single case reports and trials of new drugs are usually omitted.

British Journal of Radiology, London

22:243-294 (May) 1949. Partial Index

Observations on Ionization Produced by High-Voltage Radiation in Moulded Ionization Chambers with Walls of Various Effective Atomic Numbers. S. M. Aly and C. W. Wilson.—p. 243.
Dynamic Electrometer for Small Condenser Chambers. W. H. Sutherland.—p. 255.
Analysis of Radio-Iodine Uptake and Excretion Curves. T. H. Oddie. —p. 261.
Demonstration of Iron in Cells: Preliminary Note. A. E. Barclay. —p. 268.
Significance of Congenital Lumbo-Sacral Abnormalities. H. W. Gillespie.—p. 270.
Yaws. S. F. Oosthuizen.—p. 276.
Gastric Adenomyosis: Report of Case. R. J. C. Campbell.—p. 284.

22:295-354 (June) 1949. Partial Index

Röntgen-Ray Microspectrographic Investigation of Inflammatory Destruction of Mastoid Bone. A. Engström, C. A. Hamberger and S. Welin. —p. 309.
Observations upon Radiology of Small Intestine in Old Age. H. J. Jungmann and L. Cosin.—p. 325.
Natural History of Malignant Disease. S. Cade.—p. 331.

British Journal of Surgery, Bristol

36:337-456 (April) 1949

Simple Experimental Method of Evaluation for Bassini and Allied Types of Herniorrhaphy. F. S. A. Doran and W. H. Lonsdale.—p. 339.
Treatment of Cavernous Hemangiomas and Cirsoid Aneurysms by Injection of Boiling Water. P. Cole and A. H. Hunt.—p. 346.
Spontaneous Paralytic Ileus. W. B. Roantree.—p. 352.
Mesothelioma of Peritoneum: Report of Case and Review of Literature. J. A. Rhind and C. J. E. Wright.—p. 359.
Missile Injuries of Urethra. D. S. Poole-Wilson.—p. 364.
*Carcinoma of Rectum and Anal Canal Treatment with Very High Voltage X-Ray Therapy. I. G. Williams.—p. 376.
*Surgico-Pathological Aspects of Myasthenia Gravis. H. Reid.—p. 381.
Post-Operative Biliary Fistula: Description of New Reconstructive Operation. S. O. Aylett.—p. 387.
Urinary Incontinence Due to Ectopic Ureter. G. F. Langley.—p. 391.
Partial Hepatectomy. R. W. Raven.—p. 397.
Immediate Skin-Graft in Radical Mastectomy: Plea for More Frequent Adoption of this Method. C. Wells and D. Annis.—p. 401.
Athletes' Hernia of Tibialis Anticus Muscles. M. C. Oldfield.—p. 405.
Trichobezoar. A. M. Nussey and A. R. Leask.—p. 408.
Mediastinal Cysts of Gastric Origin: Report of Case. B. J. Bickford. —p. 410.
Observations on Bone Lesions in Hodgkin's Disease. P. J. Moir and J. G. Brochis.—p. 414.
Bilateral Aplasia of Vas Deferens. D. Young.—p. 417.
Further Report on Operation of Esophagectomy with Presternal Esophago-Gastrostomy. H. Taylor.—p. 419.
Method of Defunctioning Bladder and Rectum in Advanced Pelvic Carcinoma. K. Powell.—p. 421.

High Voltage Roentgen Radiation for Carcinoma of Rectum.—According to Williams the treatment of carcinoma of the rectum by roentgen rays generated at 200 to 250 kilovolts has been abandoned in Britain. In 1937 inquiry into the effect of roentgen rays generated at a million volts was started. The author reviews observations on 192 patients (140 with primary and 52 with recurrent lesions) who were treated with supervoltage roentgen rays to the end of 1946. The patient's general condition must be good to stand a course of treatment which causes severe general and local reactions. All patients experience a general reaction, which persists during the whole four to six weeks of treatment. After the second week reactions in organs lying in the path of the beams may add to the discomfort. There may be bladder reactions with radiation cystitis, and colitis and enteritis with tenesmus and diarrhea. The vagina may become sore. Some damage is done to the blood, and cutaneous reactions occur. Careful planning is of vital importance with supervoltage treatment. Isodose charts must be prepared for every patient, and one must know what dose each part of the irradiated field is receiving. Of 140 patients with primary carcinoma treated with supervoltage roentgen ray therapy, 128 are dead and 12 alive. Six are perfectly well and free from symptoms, 2 have growth probably still present, and the rest are comfortable and free of complications, although treatment was too recent to permit evaluation of results. One patient has a necrosis leading down to the coccyx. Two patients could not be traced, but they presumably died. Of the 52 patients who were treated for carcinoma that recurred after surgical treatment, 25 died within twelve months and 41 were dead within two years; 8 were alive and well from two and one-half to 8 years after treatment. Regression of the primary tumor is more certainly obtained in squamous cell carcinoma of the anal canal than in adenocarcinoma of the rectum. In both sites excellent palliation and prolongation of comfortable life, not merely existence, can be expected from supervoltage roentgen therapy in patients with advanced disease, provided it is still confined to the pelvis. Pain and tenesmus are relieved, bleeding and discharge are arrested, and ulceration heals. Toxic absorption is decreased, and the general well-being of the patient is improved. Although the figures for long term survival are small, they show improvement over those for alternative forms of radiotherapy. The treatment should be confined to cases in which there is reasonable prospect of producing regression of the tumor mass. For patients with advanced disease and infection, colostomy alone is less trying. The author does not believe that the improvement in the effects of these radiations is due to the shorter wavelength of the million volt roentgen rays. It is not a difference in biologic effect; rather, it is due to the increased depth-dose and to the greater accuracy and efficiency.

Myasthenia Gravis.—Reid reports 6 cases of myasthenia gravis in which he removed the thymus or a tumor. Four patients had the disease associated with a so-called persistent thymus, 1 with a malignant thymoma and 1 with an innocent thymoma. The patient with the malignant thymoma, who had severe myasthenia gravis, died after surgical removal of the tumor. The patient with the benign thymoma and severe myasthenia is much improved three months after the operation but has not yet returned to work. Three years after operation, 3 of 4 patients with persistent thymus were back at full work with few or no symptoms. One has had a recurrence and required regular doses of neostigmine.

British Medical Journal, London

1:833-880 (May 14) 1949

Extrathoracic Pain in Cardiovascular Disease. J. L. Lovibond.—p. 833.
Vioform in Treatment of Skin Diseases. I. Martin-Scott.—p. 837.
Topical Use of Vioform in Dermatology. J. Overton.—p. 840.
Disseminated Sclerosis in South Africa: Its Relationship to Swayback Disease and Suggested Treatment. G. Dean.—p. 842.
Use of Procaine Penicillin in Children. J. L. Emery, S. M. Stewart and D. G. H. Stone.—p. 845.
Acute Porphyria and Associated Electrolyte Changes. D. Davies. —p. 846.
Retained Placenta and Post-Partum Hemorrhage. H. L. Sheehan. —p. 849.
Typhoid Treated with Chloromycetin. F. Murgatroyd.—p. 851.

1:881-920 (May 21) 1949

Edward Jenner: The Man and His Work. E. A. Underwood.—p. 881.
Ehrlich's Aldehyde Test for Urobilinogen. T. M. Wilson and L. S. P. Davidson.—p. 884.
Retention of Urine. E. W. Riches.—p. 887.
Ogilvie's Syndrome of False Colonic Obstruction: Case with Post-Mortem Findings. J. A. Dunlop.—p. 890.
Chronic Ileus Caused by Malignant Invasion of Posterior Abdominal Wall. R. S. Handley.—p. 891.
Thiouracil in Thyrotoxicosis. D. Verel.—p. 892.
Thyrotoxic Auricular Fibrillation Treated with Thiouracil. J. F. Goodwin. —p. 895.
Phenology of British Hay-Fever Plants and Its Significance to Allergists. H. A. Hyde.—p. 897.
Simple Colorimetric Method for Estimating Sugar in Urine or Milk. S. El-Dewi.—p. 899.

1:921-968 (May 28) 1949

Jenner and his Impact on Medical Science. E. Mellanby.—p. 921.
Tuberculosis in Industry: Epidemiologic Study: Preliminary Report. A. Stewart and J. P. W. Hughes.—p. 926.
Some Aspects of Partial Gastrectomy. J. Hosford—p. 929.
Perforation of Rectum. J. D. T. Jones.—p. 933.
Treatment of Perforations of Esophagus: Report of 3 Cases. L. J. Temple.—p. 935.
Simulated Amnesia for Identity Treated by Electrically Induced Epilepsy. R. E. Hemphill and J. R. Stuart.—p. 938.
Unusual Case of Chronic Myeloid Leukemia. R. A. R. Taylor.—p. 940.
*Rupture of Liver Associated with Parturition. J. R. C. Burton-Brown and J. A. Shepherd.—p. 941.

Rupture of Liver Associated with Parturition.—The case described by Burton-Brown and Shepherd concerned a woman, aged 32, who was admitted seventeen hours after having given birth to her sixth child, because a complication which developed during or after labor gave rise to acute abdominal symptoms. Rupture of the liver associated with hemoperitoneum was disclosed at operative intervention. The immediate

cause of the rupture was probably the muscular compression that occurs with the expulsive efforts of labor. A predisposing factor may have been the presence of hepatic damage brought about by toxemia of pregnancy. The use of the term "spontaneous" rupture is deplored. Ruptures of the liver may be divided into two main groups: traumatic rupture and hepatic apoplexy—the first usually affecting a healthy liver and the second occurring because of hemorrhage in a diseased liver. A subgroup may be added in which minimal trauma causes rupture of a diseased organ. The case reported may be regarded as an example of this subgroup.

Edinburgh Medical Journal

56:89-128 and 25-48 (March) 1949

Genesis of Peptic Ulceration. I. Aird.—p. 89.
Primary Thoracoplasty. R. Y. Keers.—p. 99.
Clubbing of Fingers. A. W. Branwood.—p. 105.
Case of Long-Standing Tuberculous Infection with Recurring Attacks of Erythema Nodosum and Erythema Multiforme. C. Cameron.—p. 121.
*Subacute Bacterial Endocarditis and Its Treatment with Penicillin. H. Matthew and A. R. Gilchrist.—p. 25.

Penicillin in Subacute Bacterial Endocarditis.—Matthew and Gilchrist review observations on 40 patients with subacute bacterial endocarditis who were under observation from October 1944 to December 1948. Only 31 of these received adequate penicillin therapy. Of these, 21 survived and 10 died. The 21 survivors have been followed for periods varying from four years to four months. Nineteen patients completed their treatment over one year ago. Since discharge from the hospital no survivor has relapsed or become reinfected, although at least 1 has had a further attack of rheumatic fever. The minimal therapeutic requirements consist of a daily dose of 500,000 units of penicillin for four weeks, the drug being administered by intramuscular injections at three hour intervals day and night. There is evidence to suggest that larger daily doses (up to 2,000,000 units) for a longer period of time (six weeks) may eradicate the infection even more completely, with less risk of relapse and with a further reduction in the mortality rate. Early recognition of the disease will reduce the mortality rate further, but deaths from emboli and from congestive failure are bound to occur. Allowing for these, the recovery rate may yet amount to 80 per cent or more. Frank rheumatic symptoms during the course of the illness are an unfavorable prognostic sign. Although it is possible to prevent and cure bacterial endocarditis, means are yet to be found to prevent and cure its common associate, acute rheumatic carditis, which leads to death from congestive failure of the heart.

Journal of Laryngology and Otology, London

63:251-320 (May) 1949

Methods of Audiometry in Modern Deafness Clinic. P. Denes and R. F. Naunton.—p. 251.
*Clinical Survey into Effects of Turbo-Jet Engine Noise on Service Personnel: Preliminary Remarks. E. D. D. Dickson and N. F. Watson.—p. 276.
Experiences of Penicillin Treatment in Acute Otitis Media. N. Grebelius and A. Sjöberg.—p. 286.
Turning Test with Small Regulable Stimuli: V. Is Ewald's Law Valid in Men? A. A. J. Van Egmond, J. J. Groen and L. B. W. Jongkees.—p. 299.
Id.: VI. Deviations in Cupulogram. Preliminary Note on Pathology of Cupulometry. A. A. J. Van Egmond, J. J. Groen, J. Hulk and L. B. W. Jongkees.—p. 306.
Unusual Case of Ménière's Disease. J. Evans.—p. 311.

Effects of Turbo-Jet Engine Noise on Service Personnel.—Dickson and Watson say that the jet engine and the approach of transsonic flight have stimulated inquiry into the physiologic effects of vibrations. This paper presents the results of a survey on a number of Royal Air Force personnel employed in various capacities on gas turbine engine aircraft. A start was made with 97 men, who were under observation for one year. Discomfort in the ear while the revolutions per minute of the engine were being increased preparatory to flight and the minor degrees of deafness and tinnitus afterward were the most prominent symptoms. There were occasional complaints of such subjective disturbances as dizziness and unsteadiness, usually noted when the subject stood near the air intake, or at least to the fore of the aircraft. Hearing acuity, as determined by audiometry, showed that there was no deterioration during the year. The survey reveals no significant effects produced as a result of work on gas turbine engines under present service conditions during the limited time in which personnel have been so employed. Deafness or other manifestations may take a much greater interval of time to reveal themselves in turbo-jet engine personnel and yet may be apparent before such changes develop in workers on engines of the reciprocating type.

Lancet, London

1:895-942 (May 28) 1949

Radiology of Rheumatic Heart Disease. J. Parkinson.—p. 895.
Spontaneous Pneumomediastinum in Pregnancy. D. J. MacRae.—p. 902.
Acute Mediastinal and Subcutaneous Emphysema. L. Fridjohn and P. G. Azzopardi.—p. 904.
Fatal Human Case of Canicola Fever. R. S. Weetch, J. Colquhoun and J. C. Broom.—p. 906.
Canicola Fever in Germany: Report of 6 Cases. J. Mackay-Dick and R. W. E. Watts.—p. 907.
Surgery in Parkinson's Disease Division of Lateral Pyramidal Tract for Tremor: Report of 48 Operations. L. C. Oliver.—p. 910.
*Para-Aminosalicylic Acid (P.A.S.) in Pulmonary Tuberculosis. M. M. Nagley and M. H. Logg.—p. 913.
Megaloblastic Anemia in Infant. J. H. Hutchinson and P. MacArthur.—p. 916.

Para-Aminosalicylic Acid in Tuberculosis.—Nagley and Logg analyzed 37 cases of active pulmonary tuberculosis treated with para-aminosalicylic acid during 1947 and 1948. Observations in these and other cases indicate that para-aminosalicylic acid is especially valuable in the acute exudative type of disease, particularly in toxic febrile patients. Such effects as reduction in temperature, fall in erythrocyte sedimentation rate, gain in weight, and a feeling of well-being occur long before radiologic improvement can be demonstrated, and, once present, they remain during treatment. Treatment with this drug often makes patients fit for collapse therapy. The tuberculostatic action of para-aminosalicylic acid cannot be doubted. The mode of action is still uncertain. Youmans inclines to the view that the drug alters pulmonary tissue reaction from exudative to proliferative by an effect on the enzymic mechanism of the tubercle bacillus. The authors are impressed with the direct action that para-aminosalicylic acid seems to exert on the host, as shown by the patient's feeling of well-being, the antipyretic effect and the improvement in the general condition. The morphologic alteration of the bacilli, which is definitely seen under the microscope, points to a direct effect also on the bacilli, while the radiologic changes noted in the lungs support Youmans's view. The low toxicity of para-aminosalicylic acid and the fact that it does not seem to produce resistant strains give it advantages over streptomycin. However, patients with acute postoperative and other types of acute pulmonary tuberculosis should not be denied streptomycin, but the value of para-aminosalicylic acid in such cases, either in conjunction with streptomycin or after its use, should be realized. Para-aminosalicylic acid does not necessarily produce a "cure," but it often can prepare the patient for collapse therapy or pulmonary surgical treatment.

Medical Journal of Australia, Sidney

1:605-632 (May 7) 1949

Antibiotics in Australian Plants and Fungi. N. Atkinson.—p. 605.
Streptomycin, Polymyxin and Chloromycetin. J. F. Funder.—p. 610.
Recent Developments in Urology. N. J. Bonnin.—p. 612.

Practitioner, London

163:349-436 (May) 1949. Partial Index

Treatment of Syphilis. V. E. Lloyd.—p. 349.
Modern Views on Diagnostic Tests in Syphilis. I. N. O. Price.—p. 377.
Treatment of Gonorrhea. A. O. F. Ross.—p. 383.
Medical Hazards of Camping. C. G. Learoyd.—p. 396.
Medical Services in the Small Factory. C. Swanston and R. Passmore.—p. 405.
Current Therapeutics: XVII.—Streptomycin. N. B. Capon and R. McL. Todd.—p. 414.

Proceedings of Royal Society of Medicine, London

42:283-374 (May) 1949. Partial Index

Submucous Rectification of Nasal Septum. H. V. Forster.—p. 283.
Osteomyelitis of Frontal Bone of Rhinogenic Origin. R. G. Macbeth.—p. 284.
Anesthesia for Surgical Treatment of Hypertension. J. Gillies.—p. 295.
Detection of Fetal Abnormalities. J. B. Hartley.—p. 301.
The Heart in Endocrine Disease. W. Evans.—p. 331.
Some Cultural Group Abreactive Technics and Their Relation to Modern Treatments. W. Sargant.—p. 367.

Acta Medica Scandinavica, Stockholm

123:221-298 (May 7) 1949. **Partial Index**

Pregnancy in Essential Thrombocytopenia. G. F. Saltzman.—p. 221.
*Follow-Up of 687 Medically Treated Cases of Peptic Ulcer. H. Malmros and T. Hiertonn.—p. 229.
Influenza in Sweden in Light of Investigations in Recent Years. G. Löfström.—p. 253.
*Case of Aleukia Haemorrhagica (Frank) and Panmyelophthisis After Urethane Treatment in Leukemia. O. Eskola.—p. 261.

Medically Treated Peptic Ulcer.—Malmros and Hiertonn review the results of follow-up studies on 703 cases of peptic ulcer. Twelve of these subsequently proved to be of cancer and 4 could not be traced. Detailed information was obtained in the remaining 687 cases (192 gastric and 495 duodenal ulcers) after seven to ten years. The diagnosis of ulcer had been verified roentgenologically in all of the cases. The patients were kept in bed in the hospital three to four weeks. During the first week they were given a liquid or semiliquid diet, during the second week a puréed diet; during the third week a puréed diet plus other easily digested food. Even patients with hemorrhage were given a high caloric diet. The first results of this treatment were favorable in that 93.5 per cent of the patients no longer showed a crater on roentgenologic examination. The follow-up revealed a poor prognosis, in as much as the course was favorable in only 31 per cent of the patients and only about half of these were entirely free from distress. The course was definitely serious in 40 per cent of the cases; 3.9 per cent of the patients died of peptic ulcer; 5.2 per cent had perforations. The course was somewhat more favorable in patients with gastric than with duodenal ulcer. There is no real risk of malignant degeneration of peptic ulcer. It is extremely difficult to formulate generally applicable principles for the advisability of surgical treatment, but it is suggested that, if it proves difficult to change the mode of life of a patient, early operation might be advisable.

Aleukia Haemorrhagica and Panmyelophthisis After Urethane Treatment.—Eskola used urethane (ethyl carbamate) in 6 patients with chronic myeloid leukemia. The drug was given by mouth in daily doses of 8 Gm. for a period of twelve to fourteen days. During this period the white blood cell count had gone down to about 20,000 without a noteworthy effect on the red cells or thrombocytes. The decrease of the leukocytes continued without treatment during the subsequent week or two, to a value of about 10,000, and stopped at this level in 4 cases. One patient had aleukia hemorrhagica two weeks after the termination of the treatment, and another patient had panmyelophthisis. The first patient had received arsenic and roentgen therapy eight months previously, but it is unlikely that these were responsible for the development of the hemorrhagica aleukia. This patient responded to treatment with blood transfusion, penicillin, vitamins and bone marrow. Later a renewed increase in leukocytes again responded to treatment with urethane. The patient with panmyelophthisis died six weeks later, despite treatment with penicillin, liver extract and iron. The author believes that urethane must be regarded as responsible for the blood dyscrasias in these patients.

An. del Inst. de Mater. y Assist. Social, Buenos Aires

9:1-176, 1947. **Partial Index**

*Experience with Sulfonamide-Penicillin-Therapy in Cesarean Section of Infected Cases. M. L. Perez and R. Echevarria.—p. 11.
Ethinyl Estradiol as Inhibitor of Milk Secretion. R. M. Gori and E. Bayona.—p. 107.
*Spinal Anesthesia and General Anesthesia in Cesarean Section. J. R. Firpo.—p. 141.

Sulfonamide and Penicillin Therapy in Cesarean Section in Infected Patients.—Perez and Echevarria review the literature and report their large experience with cesarean section in pregnant women with infection. They believe that the combination of intraperitoneal sulfonamide therapy during the surgical intervention with postoperatively given penicillin solves the problem.

Spinal Anesthesia and General Anesthesia in Cesarean Section.—Three hundred and fifty cases of cesarean section were analyzed; 150 operations were performed with general anesthesia and 200 were performed with spinal anesthesia. With spinal anesthesia the maternal accidents were more frequent, but hemorrhages were less severe and the effect on the child was less harmful. Firpo postulates that spinal anesthesia is indicated whenever complications for the child are anticipated.

Archiv für Kinderheilkunde, Stuttgart

136:129-192 (No. 3) 1949. **Partial Index**

Role of Allergy in Gastric Disturbances During Childhood. M. Frobenius.—p. 129.
*Action of Streptomycin in Infants with Dyspepsia and Toxicosis. A. Loeschke and A. Cochlovius.—p. 154.

Streptomycin in Dyspepsia and Toxicosis.—According to Loeschke and Cochlovius streptomycin is an antibiotic with the chemical characteristics of a base. It differs in this respect from penicillin, which is an acid. Streptomycin is neither destroyed nor absorbed by the gastrointestinal tract. This characteristic is generally regarded as a disadvantage, because in order to achieve a systemic effect it is necessary to administer streptomycin parenterally. However, this characteristic and the stability of the drug make it particularly suitable for local action in the intestine. The authors gave streptomycin by mouth to children with dyspepsia. The streptomycin was given in individual doses of 25 to 75 mg. in a teaspoon of tea five to eight times daily, usually thirty minutes before a feeding. In children who refused feedings, food as well as streptomycin was given by tube. Control examinations of stools were made every day. A number of illustrative case histories are included. Streptomycin had a definite effect and caused a turn for the better even in the gravest cases. This characteristic is probably due to the specific effect that streptomycin exerts on the coliform-flora of the intestine. It causes a reduction in this flora, and sometimes the coliform organisms disappear completely from the stools. Whether the organisms in these cases were the normal ones or those typical of dyspepsia was not ascertained. These observations prove that oral administration of streptomycin will cure dyspepsia and toxicosis in infants. Improvement becomes evident at the latest after twenty-four hours. The appetite improves, and the stools decrease in number and become more formed. The body weight shows a consistent increase, and signs of intoxication (sudden screaming, coma, fever and excessive respiratory movements) subside.

Archiv f. Psychiatrie & Nervenkrankh., Berlin

181:489-756 (March 25) 1949. **Partial Index**

Structure of Neural Portion of Human Hypophysis. W. Holzer and B. Hölscher.—p. 517.
*Gestation and Multiple Sclerosis. J. Hirschmann.—p. 530.
Epidemic Encephalitis and the Concepts of Synresis: Anatomy and Pathogenesis of Postencephalitic Parkinsonism. A. von Braunmühl.—p. 543.
*Prefrontal Leukotomy. E. Moniz.—p. 591.
Encephalitis in Trichinosis with Demonstration of Trichinella in Brain. M. Schöpe.—p. 603.
Histologic and Topical Changes and Vulnerability in Human Brain in Presence of Oxygen Deficiency, Edema and Plasmatic Infiltrations. W. Scholz.—p. 621.

Gestation and Multiple Sclerosis.—Hirschmann discusses the conditions under which multiple sclerosis, when it concurs with pregnancy, may take an unfavorable course. His observations were made in 90 women with multiple sclerosis, who were observed at the Clinic for Nervous Diseases in Tübingen, and who had been pregnant once or several times. The condition in cases in which pregnancy and delivery concurred with a chronic progressive phase of multiple sclerosis usually became aggravated and took an unfavorable course. The age of the patient also seemed of considerable importance in the prognosis. Women who had advanced beyond the third decade of life were in greater danger than were younger women. Since aggravation of multiple sclerosis frequently became manifest at a period when interruption of the pregnancy is no longer possible and since, moreover, induced abortions themselves may cause considerable exacerbation of the sclerotic process, prevention of pregnancy rather than its interruption is advisable in patients in whom multiple sclerosis takes a certain course.

Prefrontal Leukotomy.—Moniz mentions the theoretical foundations for his first attempts at a surgical treatment of certain psychoses, briefly describes the technic and reviews the development and the present status of prefrontal leukotomy. He gives particular attention to the valuable advances in psychosurgery contributed by investigators in the United States.

Archivos de Medicina Infantil, Havana

10:1-65 (Jan., Feb., March) 1949. **Partial Index**

*Treatment of Pellagra with Gastric Mucous Membrane. A. Marti Prieto, E. Padron Ruiz and F. Perez Montes.—p. 1.
Congenital Megaloureter. E. Blanco Rabassa, O. Fleites and J. Jordan. —p. 45.

Gastric Mucous Membrane in Treatment of Pellagra.—The authors followed the progress of 5 patients with pellagra treated with dry gastric mucous membrane, performing weekly biopsies of the liver. There was no other lipotropic medication. The initial fatty infiltration of the liver subsided and there was an improvement in the clinical symptoms. The authors stress effectiveness of the lipotropic activity of dry gastric mucous membrane. Biopsies of the liver were performed in more than 200 cases. They constitute an indispensable feature in the diagnosis and prognosis of diseases of the liver, and they are absolutely innocuous.

Medicina, Madrid

17:159-244 (March) 1949. **Partial Index**

*The First 50 Cases of Tuberculous Meningitis Treated with Streptomycin in the "Hospital del Rey." A. M. Vallejo de Simón.—p. 161.
Extraperiostial Superior Thoracoplasty with Neumolysis. G. Manresa Formosa.—p. 181.

Streptomycin in Tuberculous Meningitis.—Vallejo de Simón reports a follow-up of 50 patients with severe tuberculous meningitis and arrives at the conclusion that intensive treatment with streptomycin will effect a cure in 15 to 20 per cent of cases.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

93:1213-1288 (April 16) 1949. **Partial Index**

Early Recognition of Carcinoma of Prostate. J. A. Weijtlandt.—p. 1214.
Perforations of Esophagus Caused by Foreign Bodies. E. Huizinga. —p. 1224.
The Scalenus Syndrome. T. Boesman and J. P. Braat.—p. 1229.
Dosage in Gold Therapy in Chronic Articular Rheumatism. R. K. W. Kuipers.—p. 1240.
*Two Attacks of Measles Within Five Weeks. A. T. L. M. Mertens. —p. 1246.

Two Attacks of Measles Within Five Weeks.—Mertens states that although most general practitioners know that second attacks of measles are possible, it is rare that the same child contracts measles twice within the same epidemic. He presents the histories of 2 children who had second attacks after intervals of thirty-two and twenty-four days, respectively. In both instances the second attack was much severer than the first.

93:1289-1396 (April 23) 1949. **Partial Index**

*Clinical Significance of Density of Bacilli in Tuberculous Sputum. W. Bronkhorst and J. K. Kraan.—p. 1299.
Occurrence of Positive Cultures in Microscopically Negative Sputums. I. N. Oosterhaan.—p. 1308.
Experiences with Tetra-Ethyl Ammonium in Treatment of Hypertension. J. A. Redlard.—p. 1330.
Complications Following Vaccination Against Smallpox. A. W. Vegter. —p. 1345.

Density of Bacilli in Tuberculous Sputum.—Bronkhorst and Kraan stress that in examining sputum for tubercle bacilli more attention should be given to the number of bacilli, since a correlation exists between the density of the bacilli in the smear and the morphologic character of the tuberculous lesion in the lung. The smear must be thin and uniform. Differences in thickness and too great thickness produce unreliable results. Staining is done in the usual manner with the method of Ziehl-Neelsen. Examination should be performed with a binocular microscope. The bacilli should be counted in 10 visual fields on the average. The authors differentiate five degrees of density. They designate the density as one plus, or very weak, when up to 40 bacilli are found in the systematic search of the smear for ten to fifteen minutes; as two plus, or weak, when on an average up to 20 bacilli are found in ten visual fields; as three plus, or moderate, when up to 60 bacilli are detected in ten fields; as four plus, or strong, when an average of 120 bacilli are found in ten fields; and as five plus, or very strong, when over 120 bacilli are found in ten fields. The true size of a visual field is about 0.18 mm., the enlargement about 700 times. The authors record the results obtained with the aforementioned classification in 500 cases studied over a period of ten years. They found that the density of bacilli increases as the size of the pulmonary cavity and the activity of the process increases.

Nordisk Medicin, Stockholm

41:623-666 (April 8) 1949. **Partial Index**

*Antihistaminics as Antidote Against Histamine-Like Effect of Curare Preparations. H. Poulsen.—p. 627.
Operative Treatment of Total and Partial Retention of Placenta. J. A. Abelina.—p. 632.
Clinical Studies on Treatment of Hydrocephalus in Children. M. Sulamaa. —p. 640.
What is Child Psychiatry? N. Waal.—p. 643.
Thyrotoxicosis in Girl Aged 4. H. Vedlingstad.—p. 648.
Para-Amino Salicylic Acid (PAS) Orally in Tuberculous Otitis. G. Smars and S. G. Kempe.—p. 649.
Hydrocele Muliebris Simulating Strangulated Hernia. H. E. Blomquist. —p. 651.

Antihistamines as Antidote Against Histamine-Like Effect of Curare Preparations.—Poulsen states that the applications of curare preparations in psychiatric shock treatment and in surgical anesthesia gives rise to undesirable by-effects, partly due to the histamine-like action of the curare. His observations in 100 patients given shock therapy preceded by curare given intravenously and in some cases also preceded by administration of an antihistamine agent, with a total of 486 shocks, and in 230 patients given anesthesia with the addition of curare (in 155 cases preceded by antihistamine given intravenously) seem to show that antihistamine substances can reduce the number of by-effects and in many cases prevent them. With curare given in electroshock therapy, antihistamine especially counteracts (*a*) hypersecretion in the respiratory tract and oral cavity and (*b*) bronchospasms and bronchiolospasms. With the use of curare in surgical anesthesia, antihistamine especially counteracts (*a*) oozing capillary bleeding in the operative field and (*b*) bronchospasms and bronchiolospasms.

Prensa Médica Argentina, Buenos Aires

36:759-794 (April 29) 1949. **Partial Index**

*Curves of Salicylemia in Man. A. Ruiz Moreno, M. Litter and D. K. de Litter.—p. 759.
Psychosomatic Aspects of Eczema. E. Pichon Rivière.—p. 780.

Curves of Salicylemia in Man.—Ruiz Moreno and collaborators made determinations of the salicylic acid in the blood of 53 persons, either normal or with chronic rheumatism, after oral administration of sodium salicylate. All the subjects in one group had a dose of 4 Gm. of the drug followed by 2 Gm. every four hours for either two or six consecutive doses. Those in the other group had a dose of 4 Gm. of the drug, followed in ten minutes by the administration of an equal dose of para-aminobenzoic acid. The authors found that the "useful" concentration of 35 mg. of salicylic acid per hundred cubic centimeters of blood, which is necessary for therapeutic effects of the drug in rheumatic fever, is reached within twenty-four hours after administration of the first dose of the drug. This concentration is maintained for twenty-four hours or more after administration of the smaller doses by either of the aforementioned methods. The concentration of the drug in the blood in some cases approaches toxic levels. It rapidly falls as soon as the administration of the drug is stopped. There was individual variability with respect to the doses used. Oral administration of para-aminobenzoic acid ten minutes after ingestion of the drug causes an increase in the salicylemic curve. The mechanism of the action is explained by the effects of the acid in increasing intestinal absorption of the drug and diminishing the rate of renal elimination of the drug. Administration of salicylic acid by mouth causes "useful" therapeutic concentration of salicylic acid in the blood. The intravenous route of administration of the drug is unnecessary. The authors point out the importance of this procedure as a guide for the treatment of rheumatic fever.

Presse Médicale, Paris

57:441-456 (May 21) 1949

Some Experimental Data on Apparent Death and Resuscitation. H. Hermann, F. Jourdan and J. F. Cier.—p. 441.
Pathology of Middle Lobe of Right Lung. R. Even, J. Lecoeur and G. Kerbrat.—p. 442.
*Clinical Syndrome of Persons Suffering from Radiation Effects Due to Explosion of Atomic Bomb. P. E. Genaud.—p. 443.

Radiation Effects Due to Explosion of Atomic Bomb.—According to Genaud, it is only now that the study of the victims of the atomic bomb explosions in Nagasaki and Hiroshima and the results of the Bikini experiments make possible an exact description of the syndrome produced by the radiation effects of the atomic bomb. Particularly sensitive to the radiation effects were the hematopoietic system, the digestive tract, the epidermis and the sexual glands. Three clinical types of the syndrome may be distinguished: (1) The hyperacute type, presented by victims who were in an area of 1 kilometer around the epicenter of the explosion and characterized by nausea, vomiting, diarrhea, rise of temperature, severe leukopenia and hemorrhages resulting in death within four to eight days. (2) The acute type, presented by those who were within 1 to 1.25 kilometers of the epicenter. In 50 per cent of these death occurred within three to five weeks after delusive temporary improvement. (3) The subacute type, presented by those who were within 1.25 to 2 kilometers of the epicenter. In this group death did not occur usually; there was a long period of remission, and the period of recrudescence was less pronounced. As to the remote consequences of the radiation effects, the most severe sequelae were related to radiomutation. The permanent commission for investigation of the radiation effects of the atomic bomb carried out research on organisms with rapid reproduction such as plants, animals and drosophilae and on the children of survivors of the atomic bomb explosions. It is still too early to draw definite conclusions.

57:479-494 (May 28) 1949

Alimentary Intoxication with Salmonella Pullorum. C. Gernez-Rieux, R. Buttiaux, A. Kesteloot and R. Suffran.—p. 479.
*Place of Needle Biopsy of Liver in Hepatology and General Medicine. P. Cazal.—p. 480.
Determination of Types of Typhoid and Paratyphoid B Bacilli by Means of Bacteriophages. P. Nicolle and A. Jude.—p. 481.

Needle Biopsy of Liver.—Cazal emphasizes on the basis of 400 needle biopsies of the liver the importance of the method whether applied by abdominal or by intercostal approach. The value of needle biopsy depends on obtaining the tissue correctly with adequate equipment, particularly with a needle of fairly large bore. The author's studies permitted diagnoses, which would have been impossible with other methods, as well as control of the clinical and humoral data, evaluation of the extent and the intensity of the lesion, condition of the parenchyma of the liver and the progress of the disease. An additional advantage of the method is the abundant and fresh material obtained for microscopic examination. With correct indications and technic, aspiration with a needle of biopsy material from the liver is inoffensive and not painful. Repeated aspirations are well tolerated.

57:507-518 (June 4) 1949

*Treatment of Bacterial Infections with Penicillin in Aqueous Solution Administered at Long Intervals. G. Bickel and H. C. Plattner.—p. 507.
Strychnine and Sleep-Counteracting Amines in Treatment of Coma Induced by Barbiturates. Cossa, Bailbe, Lombard, Maitre and Michelon.—p. 508.

Penicillin in Bacterial Infections.—Bickel and Plattner treated several patients with pneumonia, some of them with severe bronchopneumonia, with three to four doses of 300,000 units of crystalline penicillin in aqueous solution at twelve hour intervals. As a rule, treatment was continued with injections at twenty-four hour intervals, and was discontinued altogether forty-eight hours after the temperature had been restored to normal. This was usually effected with eight to ten injections, i. e., with a total dose of 2,400,000 to 3,000,000 units. In a number of cases the patients were given only one dose of 500,000 units on each of the first two days of treatment and one dose of 300,000 units on the following days. The results obtained by this method were as satisfactory as those obtained with daily multiple injections. The rate of recovery was the same, with the same rapid detoxication and the same defervescence obtained within three days. The incidence of pleuritic complications was low. In a few cases of endocarditis lenta, satisfactory results were obtained with two daily injections of 500,000 units of penicillin; the response of the patients to this method of treatment equaled that of eight injections of 120,000 units of the drug. In 1 case the sterilization of the blood was obtained within eight days with one injection of 1,000,000 units daily while six daily injections of 200,000 units for three weeks had failed. The results reported confirm those obtained by American workers, particularly Tucker and Eagle. The action of penicillin in vivo seems to be of longer duration than is shown by the determination of its degree of concentration in the blood. It might be advantageous to attack the sensitive bacteria in different stages of their development with massive doses administered only every twelve hours at the start of treatment and then every twenty-four hours.

Revista Chilena de Pediatría, Santiago

20:101-140 (March) 1949. **Partial Index**

Ichthyosis Fetalis Gravis. W. Bustamante, M. Tejeda and G. Socias.—p. 111.
*Congenital Syphilis of Bone and Penicillin. J. Rosselot and J. Hasbun.—p. 118.

Penicillin and Congenital Syphilis of Bone.—Rosselot and Hasbun state that penicillin produces a clear regression of bone lesions in congenital syphilis. The therapeutic effect is most manifest during the first 3 months of life.

Revue D'Immunologie, Paris

13:97-196 (No. 3) 1949. **Partial Index**

Serum of Hyperimmunized Men in Treatment of Whooping Cough. R. Debré, A. Tzanck, Françoise Herzog and R. Martin Du Pan.—p. 97.
*Contribution to Study of Polymyxin (Aerosporin), a New Antibiotic. C. Levaditi, A. Vaisman and J. Henry-Eveno.—p. 112.
Propagation of Tetanus Toxin by Nervous Route, Demonstrated by Resection of Nerves in Animals in State of Immunity. D. D'Antona.—p. 128.

Polymyxin.—Levaditi and co-workers studied the in vitro antibacterial activity of polymyxin A sulfate using Escherichia coli, Eberthella typhosa, Salmonella paratyphi A, Shigella paradysenteriae, Pseudomonas aeruginosa and Proteus vulgaris as test organisms. The bactericidal effect of polymyxin (30,000 and 50,000 units) was demonstrated by argyrophilia and by morphologic changes; abundant formation of stromas and occurrence of piriform bodies was observed occasionally. The bactericidal effect preceded these involutional microbic lesions. Brownlee and Bushby's observations on the radical bactericidal effect of the new antibiotic were confirmed. The involutional changes produced by penicillin in certain bacteria were earlier and of greater intensity than those produced by polymyxin. In this respect polymyxin resembles streptomycin rather than penicillin. Experiments on mice showed that seven of eight infections produced by gram-negative bacteria could be cured with polymyxin administered by the subcutaneous route in doses varying from 2,000 to 35,000 units. P. vulgaris proved not sensitive to the antibiotic in mice, although in vitro this organism had shown aptitude for involutional changes.

Schweizerische medizinische Wochenschrift, Basel

79:445-464 (May 21) 1949. **Partial Index**

*Survey of Occupational Vesical and Renal Lesions in the Dye-Stuff Industry. A. Müller.—p. 445.
Nature, Pathogenesis and Treatment of Focal Infection. G. Meik.—p. 450.
*Pharmacologic Foundations and First Results of Treating Tuberculous Processes of the Eyes with Para-Aminosalicylic Acid. R. Witmer and L. Ragaz.—p. 452.

Vesical and Renal Lesions in the Dye Industry.—Müller collected 59 cases of vesical tumors in the dye industry in Basel in 1933. From 1933 until the time of writing 78 additional cases came under his observation, making a total of 137 cases. It is conceded that the intermediate agents in the production of dye are responsible for tumor formation, particularly aniline, benzidine, naphthylamines and their homologues. It is apparently necessary for carcinogenesis that the amino group be intact. Substituted naphthylamines are prevalent in the rubber industry, but vesical tumors have

not been reported in that industry. In the patients observed by the author benzidine was held responsible 31 times, beta-naphthylamine 38 times, aniline 27 times, toluidine 11 times, and alpha naphthylamine 2 times; in other cases data were unreliable. Not only amines but also hydrocarbons may produce vesical tumors. During the war coal shortage, anthracene residues were used as boiler fuel. Vesical cancer developed five years later in a man who had been exposed for three years to the vapors of anthracene while tending a furnace. Cancers of the bladder have been observed also in workers who came in contact with tar and in those who produce gas or briquets (compressed coal dust). Estimates on the incidence of these tumors and the risk for the workers differ considerably, from less than 1 to over 30 per cent. In workers who have contact with beta-naphthylamine the incidence has been as high as 33 per cent for those who have been exposed more than five years. The latent period differs. In the author's material it varied between 1 to 45 years; the average was 17 years. These occupational cancers develop at an earlier age than do cancers of unknown causation. This can be explained by the fact that workers frequently enter this industry while in their twenties and tumors make their appearance from ten to twenty years later. Symptoms appear quite late; as a rule they are absent until the neck of the bladder and the region of the sphincter become involved, or until infection, ulceration and incrustation develops. The ratio of benign to malignant tumors has been estimated as 1:3, but even the benign tumors involve the risk of malignant degeneration. The author employs chiefly electrocoagulation for papillomas and small carcinomas. Regular control examinations and prompt treatment of new growths may prevent the development of large and perhaps also of malignant growths for years and decades. Resection of the bladder is recommended for carcinoma. At a Basel dye factory, the urine of the workers is examined every three months for albumin and occult blood. If the reactions are repeatedly positive, a cystoscopic examination is performed.

Para-Aminosalicylic Acid in Tuberculosis of the Eye.—Witmer and Ragaz report experimental studies with para-aminosalicylic acid on the eyes of rabbits. The aqueous humor of the rabbit eye contains effective concentrations of the drug for six hours, if it is administered in a dose of 0.28 Gm. per kilogram of body weight. The compound readily penetrates into the aqueous humor following the subconjunctival injection of an isotonic 2.8 per cent solution of para-aminosalicylic acid, but the concentration rapidly subsides after this mode of administration. Observations on 3 patients with tuberculous uveitis reveal the favorable effect in such cases. Six additional patients are still under treatment, which cannot as yet be evaluated. Three severe cases appear to be somewhat refractory. On the basis of experimental and clinical experiences, the authors recommend a daily dose of 3 times 10 or 3 times 12 dragées of the drug by mouth for five days, followed by an interval of three days without treatment. Effect of the oral medication is supported by the subconjunctival injection of a 2.8 per cent solution of the drug every second day. These injections can be given every day during the three day interval when oral treatment is not given. The tuberculous character of the uveitis must be definite, and other etiologic factors must be excluded before treatment with para-aminosalicylic acid is instituted. The nature of the disease should be verified by local observations, by tuberculin tests and by general physical examinations.

Ugeskrift for Laeger, Copenhagen

111:417-442 (April 14) 1949. Partial Index

*Hormonal Treatment of Cancer of Breast with Special Regard to Treatment with Androgenic Hormones. S. Kaae.—p. 417.
Treatment of Supracondylar Fracture of Humerus by Aid of Persson's Frame. A. Jessing.—p. 419.
*Bandl's Ring Treated with Amyl Nitrite. D. Prytz.—p. 426.

Endocrine Therapy of Cancer of the Breast with Special Regard to Treatment with Androgenic Substances.—Kaae says that in addition to palliative radiotherapy in inoperable cases of cancer of the breast and in recurrence and mestatases after operative intervention roentgenologic castration, massive doses of androgens and more limited doses of estrogens can be advantageously applied. The effect in all cases is temporary. Treatment with massive doses of estrogens is indicated only in cancer localized to the soft parts in women aged 60 or over and should not be applied in premenopausal women. Roentgenologic castration often gives excellent effect before the menopause and in the first years following. Treatment with androgens can be given at all ages, in younger women after the effect of roentgenologic castration has ceased. The best effect occurs in osseous metastases. Since pronounced aggravation may appear during the treatment, especially when the serum calcium level is high or rising, regular control of the serum calcium during treatment is necessary. The androgenic substance used has been testosterone propionate, which in oil emulsion should be given in doses of at least 60 mg. two or three times weekly, in somewhat larger doses at the start, the first series of treatments to be continued for at least three months. With presumably equally good effect, testosterone propionate in crystalline suspension can be given with less frequent injections of correspondingly larger doses; for example, 100 mg. once a week. Testosterone propionate tablets can be implanted subcutaneously, but the treatment should probably be repeated at intervals of a few months at the most and with implantation of massive doses, 1,000 mg. or more.

Bandl's Ring Treated with Amyl Nitrite.—Prytz ascribes the improved prognosis in constriction ring dystocia to the combined use of antispasmodic drugs and active intervention. Treatment with amyl nitrite, according to Gilliat, as the introduction to delivery in women with Bandl's ring is simple, cheap and as a rule effective and without danger. The contraindications are few (glaucoma, grave circulatory disturbances and collapse). Of the 5 cases reported, the history of 1 woman with twins, with typical constriction ring after birth of the first twin, is described in detail. Treatment with amyl nitrite inhalation was followed by unexpectedly easy forceps delivery of a high head. There were no complications for mother or child.

Nordisk Medicin

111:443-464 (April 21) 1949. Partial Index

Treatment of Paralysis Agitans with Parpanit. T. Dalsgaard-Nielsen.—p. 446.
*Little's Disease Treated with Parpanit. T. Jersild.—p. 449.
Disappearance of Dental Substance Due to Action of Acid in Oral Cavity. J. Hansen.—p. 451.
Undulant Fever and Unpasteurized Milk. F. Raaschou.—p. 452.

Little's Disease Treated with Parpanit®.—Jersild says that, while parpanit® (diethylaminoethyl-1-phenylcyclopentane-1-carboxylate hydrochloride) does not supersede other forms of treatment of this disease, it may be a valuable supplement. Four patients treated with the drug are reported. The agent was without effect in the patient with only spastic symptoms in the lower extremities. Results were good in the 3 patients with extrapyramidal disturbances in addition to spasticity.

Wiener klinische Wochenschrift, Vienna

61:289-304 (May 13) 1949. Partial Index

Heredity and Environment in Tuberculosis. L. Popper.—p. 289.
Encephalitis in Endocarditis Lenta. F. Sommer.—p. 292.
*Experiences with Temporary and Permanent Exclusion of Vagus Nerve (Vagotomy and Vagotripsy) in Peptic Ulcer. E. Ebner.—p. 296.
Perforation of Meckel's Diverticulum During Pregnancy. M. Wenzl.—p. 298.

Temporary or Permanent Exclusion of Vagus Nerve in Peptic Ulcer.—Ebner employed exclusion of the vagus nerve only in cases of milder disease. Resection was always done in the presence of large callous ulcers or stenosing duodenal ulcers and whenever carcinoma was suspected. Vagotomy was done in 8 cases of gastric ulcer, 10 cases of duodenal ulcer, 1 jejunal ulcer and once in adhesive perigastritis, a total of 20 cases. Vagotripsy (crushing of the vagus nerve) was done in 1 case each of gastric and duodenal ulcer and in 10 patients with adhesive perigastritis. The favorable effects and the postoperative course was about the same with vagotripsy as with vagotomy, except that the undesirable late effects were somewhat less frequent with vagotripsy. The author concludes that generally resection is to be preferred but in some cases vagotomy is better. Vagotripsy is indicated in disturbances caused by adhesions (adhesive perigastritis), in the presence of pains from inoperable carcinomas and in the presence of small gastric or duodenal ulcers.

Book Notices

Campbell's Operative Orthopedics. Editor: J. S. Speed, M.D.; Associate Editor: Hugh Smith, M.D. Volumes I and II. Second edition. Cloth. Price $30. Pp. 836; 837-1643, with 1141 illustrations. C. V. Mosby Company, 3207 Washington Blvd., St. Louis 3, 1949.

The new two volume edition of 1,643 pages of text and over 1,100 illustrations forms a most fitting amplification of the late Dr. W. C. Campbell's original work. The editors have truly met a timely need in carefully compiling and correlating the up-to-the-minute recognized orthopedic instruments, methods, technics and equipment, used in the surgical treatment not only of the conditions seen in everyday practice but also of unusual pathologic conditions.

This is a scientific work that every orthopedic surgeon will want in his library. It is a valuable reference for every fellow or resident studying orthopedic surgery, a useful guide for nearly every accepted method of treating surgically any orthopedic condition. The surgeon who has even a casual interest in orthopedic problems, or is occasionally confronted with such conditions, with the aid of the text can evaluate the various technics for a specific case. The material is sufficiently detailed to give a clear picture of all potentialities. The splendid illustrative material adds much to the clarity and interest of the pathologic conditions and treatment discussed.

There are some minor features that might be improved. The editors in their effort to give due recognition of every estimable procedure that might be appropriately used under certain circumstances in a particular deformity, often leave the inexperienced surgeon with a choice of so many technics that he may become confused. Most of these methods have a distinct place, and it would seem that an allowance for space would be warranted for an explanation and basis for judging the technic best adapted for the various types of deformity. The young inexperienced surgeon, or the courageous general surgeon who occasionally does an orthopedic operation, might be led astray in his judgment by the attractiveness of a particular picture of technic as compared with another.

It is essential that the reader not only study the many technics but that he read the introductory paragraphs of each chapter, as these are a key to valuable information and general explanation with respect to anatomy, physiology, pathology and prognostic possibilities of the technics that follow. The opinion of the editors is invaluable in the selection of a suitable operative procedure.

The reviewer feels that one who has a new edition of Campbell's Operative Orthopedics will have an up-to-date exhaustive work on this subject for several years to come.

Adoptions in New York City. Report of an Inquiry into Adoptions and Related Services by the New York City Committee on Adoptions. Sponsored by the New York Academy of Medicine, the United Hospital Fund of New York, the Welfare Council of New York City. Paper. Price, $1.25. Pp. 98. The Welfare Council of New York City, 44 E. 23rd St., New York 10, 1948.

This is the report of the New York City Committee on Adoptions to its sponsors, The New York Academy of Medicine, The United Hospital Fund of New York and the Welfare Council of New York City.

The work of the committee is authorized, explained, commended and limited, respectively, by a sponsor's note, a forward, an introduction and a preface. The report proper, some 37 pages, is divided into four sections. The first contains quotations from some laws and discusses other laws and regulations governing adoptions in New York City. The second section describes the types of services made available by adoption agencies in New York City and discusses the adequacy of these services in view of present and anticipated demands. The third recognizes the right of the public to know what adoption agencies are for and advocates a program of public relations. The fourth section presents the committee's recommendations for modifying and improving adoption procedures and services. Three appendixes, besides including a further quotation from the statutes, describe methods used by the committee in making this study.

Care of the Surgical Patient, Including Pathologic Physiology and Principles of Diagnosis and Treatment. By Jacob Fine, M.D., Surgeon-in-Chief, Beth Israel Hospital, Harvard Medical School, Boston, Mass. Cloth. Price, $8. Pp. 544, with 40 illustrations. W. B. Saunders Company, 218 W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W.C.2, 1949.

This guide to the care of the surgical patient has been prepared with the assistance of several collaborators. While it ideally represents the standard practice in the surgical service of one teaching hospital, it covers a variety of situations which are daily problems in any active surgical hospital. As such it leans heavily on experience and gives few references to the literature.

The book begins with an outline for examining the patient admitted to the service. The unconscious patient is a frequent problem and the description of what to look for is a gem of brevity. This is followed by a description of technic for regional examinations. General considerations of the status of the patient, depending on the particular pathologic processes encountered, come next. Nutrition, fluid balance, shock, hemorrhages and infections are some of the subjects discussed. Ideas on liver toxins in shock are mentioned. The management of common postoperative situations, such as a "postgastrectomy state," are described. It is suggested that such distressing problems as "dumping" or prolonged retention following gastric resection deserve more than mention. These are problems that often make life on the surgical service difficult for all the assistants and the surgeon. The significance of biliary drainage from a wound following apparently simple cholecystectomy is more thoroughly presented. Illustration of some of these problems by brief case histories stressing the management involved would be valuable. However, the personal experience reflected in almost every line adds a distinctly fresh approach. This volume is a valuable addition to the surgeon's library.

Doctor of Medicine. By Irma Gross Drooz, M.D. Cloth. Price, $3. Pp. 388. Dodd, Mead & Company, Inc., 432 4th Ave., New York 16, 1949.

Dr. Drooz conducts the reader through the agonies and the joys of a complete medical education. She does this in a thoroughly readable and authentic autobiography of a career that, to date, has not yet really begun.

The volume gives a truthful account of the problems which beset the average premedical student, which in her case were greatly increased because of her sex. An account is given of her financial struggles, her application for admission to medical school, her acceptance, the introduction to her medical studies and their unfolding through her four years of study. She portrays her faculty clearly but fortunately kindly, since many of them can no doubt be identified from her account. The courses she studied, with the textbooks and instruments needed, are discussed in detail, and the various costs are mentioned. The author also takes the reader through the lean years of hospital training which many a doctor must spend after medical school. The various licensing examinations, the internship and residencies are pictured, and she even touches on the problems of starting in general practice through the experiences of her classmates. Throughout the account she seems to lead a normal life, as medical students go, having little time for recreation and having only one real male friend, a classmate who surprised her by suddenly marrying one of her best friends, but all ends happily as she meets and marries the man of her dreams in her neurosurgical residency.

The book is entertaining reading in addition to being an accurate and complete account of the process of becoming a lady doctor. Most of it applies equally well to either sex. It should be made required reading for medical school faculties, since it gives a neat picture of their effectiveness from the point of view of a capable student. It is an excellent book for the student about to embark on the study of medicine and for his parents, since they will gain a clearer perspective of the years of struggle which lie ahead. It would be a good book for the doctor to have where his patients could read it, if they had that much time, as it is both entertaining and accurate and would give them an understanding of the time, trouble, work and expense which have gone into every physician's education.

Fundamentals of Internal Medicine. By Wallace Mason Yater, A.B., M.D., M.S., Director, Yater Clinic, Washington, D. C. Third edition. Cloth. Price, $12. Pp. 1451, with 315 illustrations. Appleton-Century-Crofts Company, Inc., 35 W. 32d St., New York 1, 1949.

The first edition of this book appeared in 1938. It originally was designed to present the essentials of internal medicine in the simplest possible form for students and practitioners. This objective has been achieved.

There are eighteen contributors in addition to Dr. Yater. Nevertheless, the simple style and concise presentation has been maintained throughout. The four closing chapters are somewhat unusual and deal, respectively, with "Symptomatic and Supportive Treatment," "Inhalational Therapy," "Clinical Values and Useful Tables" and "The Physician Himself," the latter including brief discussions of internships, licensure, specialist certification, medical ethics and similar nonscientific material, all of which is interesting and useful.

Dr. Yater remarks in the preface to this edition that he was struck with the tremendous number of changes and additions necessary. Indeed, this problem must have been faced by everyone revising a textbook during the past few years.

The attempt at simplification may have gone too far in some cases. Most of the rarer diseases are discussed so briefly that they are hardly worth mentioning at all. For example, David's disease is dismissed with the statement, "This is a rare condition of women in which there are submucous and subcutaneous hemorrhages with normal blood factors."

A convenient list of recommended texts appear at the end of each chapter. It is difficult to keep these up to date. For example, on page 665 Means' book, "The Thyroid and Its Diseases," is listed as published in 1937 although the most recent edition appeared in 1948. Similarly, on page 1387 Wiprud has a new edition of "The Business Side of Medical Practice."

All in all, this book undoubtedly has met a real need and should continue to be of help to the busy practitioner and the overburdened medical student.

Projective Techniques: A Dynamic Approach to the Study of the Personality. By John Elderkin Bell. Cloth. Price, $4.50. Pp. 533, with 7 illustrations. Longmans, Green & Co., 55 Fifth Ave., New York 3, 1948.

Projective technics, as the author points out, do not necessarily involve projection in the psychoanalytic sense. The term refers to a group of methods designed to reveal the dynamics of the individual personality. They do this through the presentation of somewhat ambiguous material to the patient or subject, thus leaving him free to organize the material in terms of the different aspects of his own personality.

Dr. Bell has described each projected technic in detail, evaluating each from the standpoint of its clinical usefulness, validity and reliability. He deals not only with the well known methods, such as the Rorschach, Thematic Apperception Test and Bender Visual-Motor Test, but also with little known technics.

The book is somewhat more detailed than is necessary for an introduction to the methods, but it is undoubtedly the best source of finding out "what all these technics are about." The hasty reader can find the gist of the material in the chapter summaries and then decide whether to read the entire chapter.

Dr. Bell has organized his material very well and has an excellent expository style. Although he points out that projective technics are of little value except in the hands of the skilled examiner, he believes that they "are the most promising for speedy diagnosis of the total personality. With all their present deficiencies—and the author has taken pains to point them all out—they have established for themselves a secure position in research and clinical study."

A tuberculose na vida e na obra de Dostoievsky. Por Homero Silveira, assistente técnico da Divisão do serviço de tuberculose do Estado de São Paulo. Paper. Pp. 61. Pongetti, Rio de Janeiro, 1948.

A short monograph in Portugese by Homero Silveira deals with the subject of the cause of death of the great Russian writer Fédor Mikhailovitch Dostoievsky. Silveira stresses the fact that of the numerous biographers of Dostoievsky none was concerned with the cause of his death. That, in the reviewer's opinion, was probably due to the fact that his biographers were preoccupied with Dostoievsky's "sacred illness" which played so important a role in his life and in his literary creations. His familiarity with symptoms of tuberculosis is hardly a valid argument that he himself had been a victim of the disease. He has indeed portrayed many morbid states with remarkable skill and fidelity, in particular that of epilepsy. Dostoievsky died in 1883 in the course of a short illness (two days) punctuated by massive pulmonary hemorrhages. Silveira adduces the following facts to support his thesis that Dostoievsky died of pulmonary tuberculosis. He suffered throughout his life from frequent colds, chronic laryngitis, bronchiectasis, emphysema and occasional hemoptysis. His mother probably suffered from pulmonary tuberculosis; she died at the early age of 37. Her maid probably also died of pulmonary tuberculosis. Fiodor was exposed to tuberculosis while visiting patients in the hospital of his father. His first wife, Issayeva, died of pulmonary tuberculosis. His first child died at an early age, probably of tuberculosis meningitis. Dostoievsky was immoderate in smoking and consumption of alcoholic drinks. In support of Silveira's retrospectic diagnosis, there is the fact that tuberculosis was extremely common in Russia and that many a literary light was first stimulated and later snuffed out by that universal scourge.

Malignant Disease and Its Treatment by Radium. Volume II. By Sir Stanford Cade, K.B.E., C.B., F.R.C.S., Surgeon, Westminster Hospital, Mount Vernon Hospital and Radium Institute, London. With a foreword by Sir Ernest Rock Carling, F.R.C.P., F.R.C.S., F.F.R., Consulting Surgeon and Vice-President Westminster Hospital. Second edition. Cloth. Price, $12.50. Pp. 430, with 162-306 illustrations. Williams & Wilkins Company, Mt. Royal & Guilford Aves., Baltimore 2, 1949.

The second of four volumes dealing with cancer of the mouth, pharynx, larynx and the neck constitutes an attractive presentation of the biologic characteristics of malignant disease and its treatment by radium, which marked the first volume previously reviewed in THE JOURNAL. The illustrations are numerous and excellent. The choice of method of treatment is discussed without bias and detailed instructions are given as to the technic. In spite of the inference that the author deals only with radium, there is a combination of roentgen and radium treatment for many cases. The author's experience indicates that in the mouth and in the pharynx radium is a more reliable medium of irradiation than the roentgen rays with the usual 200 kilovolts employed up to this time. For the tongue the introduction of radium needles remains the best method. Interstitial radium is still of value in accessible lesions. Teleradium is preferable for tumors of the pharynx and larynx. Because of the thoroughness of presentation, the book should appeal to everyone dealing with malignant disease, even though he may have no special interest in radiation.

Feeding Problems in Man as Related to Environment: An Analysis of United States and Canadian Army Ration Trials and Surveys, 1941-1945. By Robert E. Johnson, M.D., D.Phil., and Robert M. Kark, M.R.C.P. Paper. Pp. 94, with 13 illustrations. [United States, Department of the Army]. Quartermaster Food and Container Institute for the Armed Forces, Research and Development Branch, Office of the Quartermaster General, 1949 W. Pershing Road, Chicago 9, [n. d.].

This monograph is a critical review of data obtained on the feeding of United States and Canadian troops subjected to different environmental conditions. These conditions ranged from artic, subartic, temperate, mountain, desert and tropical to subtropical environments.

The authors state that caloric and fluid balance deficiences impaired operational efficiency more rapidly than vitamin deficiences, and they stress the need for an attractive assortment of palatable foods in the rations as being essential to troop morale and efficiency. For example, in one case 60 per cent of the available dehydrated meat and 21 per cent of the available biscuits were returned uneaten, and troop morale and efficiency declined visibly. In general, troop morale and efficiency was highest when the preferred foods, such as meat, dairy products, fruit juices and vegetables, were given in the variety commonly eaten by North American civilians.

In all climates the relative proportions of protein, fat, carbohydrates and vitamins consumed were surprisingly constant, although in different environments different needs must be met;

for example, in cold climates the outstanding need was for calories, while in the hot climates the need for fluids and salt was more outstanding.

This monograph, while primarily of interest to research workers in the field of nutrition and to the physicians serving with the armed forces, is a step forward in the direction of a more complete knowledge of nutritional requirements as they are affected by environment.

Bright's Disease. By Henry A. Christian, A.M., M.D., LL.D. [Reprinted from Oxford Loose-Leaf Medicine with the same page numbers as in that work.] Cloth. Price, $9. Pp. 583-640 (327), with 40 illustrations. Oxford University Press, 114 Fifth Ave., New York 11, 1948.

This monograph on Bright's disease, a component part of the Oxford Loose Leaf Medicine, is the recorded personal experience of Dr. Henry A. Christian at the bedside and in the laboratory over a period of nearly half a century. It contains an excellent discussion of the normal and pathologic physiology of the kidney and the section on pathology is well illustrated. These sections give the reader the essential background for an intelligent understanding of the clinical aspects of the disease.

The reviewer wholeheartedly concurs with the author in his emphasis on the careful and repeated examination of the urinary sediment by the physician himself.

Dr. Christian uses a clinical classification of Bright's disease which differs from that generally employed by other workers in this field. He excludes acute pyelonephritis from this classification but includes chronic pyelonephritis or, as he terms it, "chronic Bright's disease secondary to pyelonephritis." This he justifies by the fact that the clinical observations are identical with those of primary chronic Bright's disease.

That chronic pyelonephritis should be included in any discussion of Bright's disease needs no argument. However, the exclusion of acute pyelonephritis from this book is regrettable. With the present armamentarium of drugs, acute pyelonephritis is amenable to treatment. Hence, one important form of chronic Bright's disease is preventable. This is in striking contrast with most other forms of chronic Bright's disease as the author himself notes on page 640: "We needs must acknowledge the impotence of much lauded preventive medicine when we are dealing with chronic Bright's disease." The proper discussion of a preventable disease which in its intricated state leads to a crippling irreversible illness is, therefore, of great importance and should be included in a monograph of this nature.

Under the heading of special types of Bright's disease the author lists separately (1) traumatic uremia: crush syndrome; myoglobinuria; (2) hemoglobinuria: blackwater fever; transfusion renal reactions, and (3) sulfonamide kidney. All of these conditions are now considered to be part of the syndrome of lower nephron nephrosis.

He advocates that as soon as oliguria develops sodium lactate and isotonic sodium chloride solution are to be employed. This is questionable advice, because most patients in the oliguric phase of the lower nephron nephritis have been shown to have hypervolemia. There is a danger of edema from the use of sodium lactate and isotonic sodium chloride solution. Despite these criticisms the book is highly recommended to all those interested in the subject. The usefulness of this monograph is enhanced by an extensive and up-to-date bibliography and an excellent index.

The Skin Problem Facing Young Men and Women. By Herbert Lawrence, M.D. Paper. Pp. 70. Timely Publications, 303 Butler St., San Francisco, Calif., 1948.

This monograph, written for the adolescent and his or her parents, undertakes to explain the problems of acne. The clinical picture, the several causative factors, the various treatments and their rationale, the emotional reactions of the youngsters and parents, the social implications and the many misconceptions of the disease are all discussed in simple, clear language. There is a tendency to wordiness, however, and to too much repetition. There may be some criticism also of the author's overemphasis on psychogenic factors, but withal the booklet should serve a useful purpose.

Community Organization for Recreation. By Gerald B. Fitzgerald, Assistant Professor and Recreation Consultant, Division of Recreation, Department of Physical Education and Athletics, University of Minnesota, Minneapolis. Cloth. Price, $4. Pp. 352. A. S. Barnes & Company, 101 5th Ave., New York 3, 1948.

Three basic assumptions constitute the framework on which this book has been constructed, and their soundness is demonstrated by the author's development of his subject. They are: (1) unless there is recognition and acceptance of public responsibility for a recreation service no satisfactory community organization can be developed; (2) both private and voluntary groups are essential resources, and (3) laymen must accept a place (the author says with polite restraint "have a place") in community recreation planning.

Necessary orientation is provided by chapters on the concept of community recreation, the social setting of leisure and recreation and community organization backgrounds. Next are considered local, state and national approaches to community organization, as well as an excellent discussion of the place of the schools in community organization for recreation. Especially helpful are the last four chapters, in which are given data on the making of a recreation survey, the makeup of the local public recreation authority, principles of organization and community leadership. Perhaps the most significant point made is the emphasis on the need for active participation by far more members of the average community.

In addition to extensive lists of suggested readings at the end of each chapter, broken down into books, articles and other publications, a special appendix contains reviews of organization for recreation in Australia, Canada and Great Britain. This volume is thought provoking and action stimulating.

Acute Intestinal Obstruction. By Rodney Smith, M.S., F.R.C.S., Assistant Surgeon, St. George's Hospital, London. With a chapter on Radiological Diagnosis by Eric Samuel, M.D., F.R.C.S., F.F.R. Foreword by Rupert Vaughan Hudson, F.R.C.S. Cloth. Price, $5. Pp. 250, with 102 illustrations. Williams & Wilkins Company, Mount Royal & Guilford Aves., Baltimore 2, 1948.

Addressed particularly to English physicians, this small volume affords an excellent review of present day concepts of the treatment of intestinal obstruction. There is little that is original in this volume. The various technics of intestinal intubation, fluid balance and protein replacement and the use of radiography are stressed. Considerable emphasis is placed on chemotherapy. A fuller account of blood chemical changes would be of value, stressing the advantage of such determinations in assessing the status of the patient at any time. The author advocates early surgery in obstruction of the large intestine and points out the significance of a competent ileocecal valve (he still regards it as a sphincter). The therapy of small bowel obstructions with adequate analysis of pathology and classification of varieties is well described. The illustrations are useful and the style is somewhat effusive, but the contents of this book are of value to surgeons.

Discoverers for Medicine. By William H. Woglom, M.D. Cloth. Price, $3.75. Pp. 229 with illustrations. Yale University Press, 143 Elm St., New Haven 7, Conn.; Oxford University Press, Amen House, Warwick Sq., London, E.C.4, 1949.

The author names some of the "amateurs" who have made scientific discoveries or who have done significant work which led to notable advances in medicine. Even princes and kings have not distained to be amateurs of science. Witness Charles II, founder of the Royal Society of London, at work in his "chymical" laboratory. The author says that Lord Cavendish, "living on mutton," learned the composition of water. Stephen Hales, a clergyman, was the first to determine the blood pressure. Amateur scientists flourished particularly in England. Joseph Priestley, also a clergyman, occupied himself with the chemistry of gases. The origin of some medical discoveries rests on "folk beliefs" and is lost "in the mist of time." Benjamin Rush, one of the great figures in American medicine, the author says, told his pupils that they could learn useful methods from quacks and old women. On the other hand, medicine has given generously to art, other sciences and politics, such names as Sir Thomas Browne, best known for his "Religio Medici": Oliver Goldsmith, S. Weir Mitchell, A. Conan Doyle, Oliver Wendel Holmes, Sir Francis Seymour

Haden, Thomas H. Huxley, Sun Yat-sen and Georges Clemenceau. After the interesting introduction, the author reviews at length the background of various medical discoveries in chapters under such titles as Vaccination; Blood pressure; The Laryngeal Mirror; Eyeglasses and Spectacles, and Heredity. Gregor Mendel's epic work is reviewed, as is phagocytosis, with which Metchnikoff's name is inseparable, and roentgen rays (Wilhelm Conrad Roentgen).

This book emphasizes a fact which is generally acknowledged: medicine is not only indebted to many persons who worked outside its ranks but has often been inspired to take up ideas of humble origin and work them through to bring forth discoveries that have been of great benefit to mankind.

Voluntary Parenthood. By John Rock, M.D., and David Loth. Cloth. Price, $3. Pp. 300. Random House, Inc., 457 Madison Ave., New York 22, 1949.

The practitioner of medicine who is frequently confronted with the problems of reproduction will find "Voluntary Parenthood" valuable and interesting. This book serves as an accurate scientific guide to parenthood, both voluntary and involuntary. It is written in a manner readily understandable to the layman, so that parents, couples desiring enlightenment on mating problems and teachers will find it a most acceptable source of information. The criteria of fertility and the causes and treatment of infertility are described with authoritative accuracy. Taboos and faulty ideas concerning mating problems are justly exposed. Methods of suppression of fertility are detailed and evaluated in the light of statistical data quoted from the medical literature. "Voluntary Parenthood" deserves broad acceptance by physicians and also by individuals or groups interested in the problems of parenthood and its control.

Human Nutrition. By V. H. Mottram, M.A. Cloth. Price, $2.75. Pp. 207, with 9 illustrations. Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1948.

This compact pocket-size book, written by a former professor of physiology at King's College of Household and Social Science, University of London, presents a body of important information on nutrition in a manner that the intelligent layman will understand. The author succeeds admirably in stimulating and maintaining interest. He reviews fundamentals of nutrition and indicates how these may be applied to both individual and group needs. For the physician who wishes to refer a patient to a useful text on foods and their utilization, this book is a good choice. Teachers will find it valuable as supplemental reading for students. Wars, depressions and periods of adjustment have forced many to give serious thought to the fundamental importance of food in the world situation. For those who recognize the need for a virile national nutrition program this book will be of special interest.

Mathematical Methods for Population Genetics. By Gunnar Dahlberg, Head of the State Institute of Human Genetics, Uppsala, Sweden. Cloth. Price, $4.50. Pp. 182, with 32 illustrations. Interscience Publishers, 215 Fourth Ave., New York 3; S. Karger, Holbeinstrasse 22, Basel, 1948.

The science which concerns the genetics of human population is growing rapidly. This small book, which is a translation of a German edition published in 1943, is one of the first attempts to place under one cover the mathematic methods which are so essential to an analysis of the problems of this new science. The early sections of the book deal with the effects of different mating systems on the genetic structure of a population. Later sections concern the effects of selection, mutation and geographic as well as social isolation. The last section is a summary of the interactions of these various factors.

Although some will disagree with some of the ideas expressed in the book and consider many of the mathematic expressions or terms unfortunate choices, the book is a valuable one. It may well serve as a starting point in a study of the genetics of human populations and also serve as a stimulus to those who already are working in this new field. The book should be of value to the clinician who is interested in populational aspects of inherited human variations.

Cold Spring Harbor Symposia on Quantitative Biology. Volume XIII: Biological Applications of Tracer Elements. Cloth. Price, $7. Pp. 222, with illustrations. Long Island Biological Association. The Biological Laboratory, Cold Spring Harbor, N. Y., 1948.

Each of the previous symposiums has dealt with a single, though broad, problem in the borderline areas of biology, physics, chemistry and mathematics. The present symposium differs in that it centers on a method which is applicable to many problems. The primary emphasis is on the results obtained in biologic experimentation, rather than on the questions of production of tracer compounds or of the methods applied in their use.

This volume contains twenty-five contributions, including studies on lipids, radioisotopes, purine metabolism and biosynthesis of porphyrins. The authors have contributed original knowledge and speak with authority on their respective fields. However, this is obviously not a book for the average general practitioner or internist. It is a valuable reference work for the physiologist, biochemist and pharmacologist and for the physician who wishes to use tracer elements in the diagnosis or treatment of disease.

Practical Lessons in Psychiatry. By Joseph L. Fetterman, M.D., Director, the Fetterman Clinic, Cleveland, Ohio. Cloth. Price, $5.75. Pp. 362. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill., 1949.

The author offers this book to achieve a better understanding of common neuropsychiatric conditions. It consists of 348 pages of tangible and everyday problems of patients as seen at the bedside, in the clinic and in the office. It is readable and understandable. The author states that it was presented and published for use by general practitioners, psychologists, social workers, nurses and personnel advisers who share the responsibility of guiding those who are mentally ill. It has eleven chapters and consists of three chapters on the patient and psychoneuroses; the fourth, fifth and sixth divisions discuss manic-depressive states (chiefly depressions), schizophrenia and electrocoma therapy of psychoses; chapter seven takes up psychopathic personality; chapter eight, toxic and organic psychoses; chapter nine, neurosyphilis; chapter ten, epilepsy, and chapter eleven the physical and mental sequelae of head trauma. There is a small bibliography after each chapter. This book will help the general practitioner in understanding some of his patients' problems and difficulties.

Minor Surgery. Edited by Sir Honeage Ogilvie, K.B.E., D.M., M.Ch., and William A. R. Thomson, M.D. With an Introduction by Lord Webb-Johnson, K.C.V.O., C.B.E., D.S.O. Second edition. Cloth. Price, 14s. Pp. 192, with 34 illustrations. Published on behalf of The Practitioner, 5 Bentinck St., London, W.1, by Eyre & Spottiswoode, Ltd., 14-16 Bedford St., London, W.C.2, 1949.

Designed for use by the general practitioner, this book is one of a series of practitioner handbooks. The introduction by Lord Webb-Johnson spends several hundred words in defining the term "minor surgery" and points out that it often includes grave problems. The text is a brief résumé of some of the lesser surgical problems which fall into the category of minor surgery. In general the advice given is sound, and the few technics described are well done. In this country the use of coagulants for the treatment of burns has been abandoned. It is surprising, therefore, to find such a method given priority over the use of simple pressure dressings.

Dizionario Inglese-Italiano per le Scienze Mediche. A cura di Ruggero Marozzi e Elena Elsa. Cloth. Price, 2400 lire. Pp. 548. Edizioni Minerva Medica, Via Martiri della Libertà, 15, Turin, 1949.

This English-Italian Medical Dictionary is primarily meant for the Italian medical profession. Although there is for the American medical scientist more need for an Italian-English publication, it will still be of good use for those interested in Italian medical literature. Many of the terms in this work are either rarely used or obsolete and could have been deleted without materially decreasing its usefulness. However, this should not be a point of major criticism, because, on the other hand, it includes many up-to-date terms which are not to be found in technical dictionaries of similar nature.

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Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

VITAMINS IN BREAST MILK

To the Editor:—It is my belief that even a breast-fed infant requires a vitamin supplement, particularly vitamins D and C. My colleagues agree in reference to vitamin C but state that sufficient vitamin D is contained in the mother's milk to supply the infant's needs. In your reply would you please supply references.

Wenonah King Thom, M.D., Chico, Calif.

ANSWER.—The milk of a healthy mother whose diet is nutritionally adequate contains sufficient amounts of all the nutritional factors necessary for an infant with the exception of iron, vitamin D and possibly thiamine. Nature presumably intended that vitamin D be obtained from the sun (Jeans, P. C., and Marriott, W. M.: Infant Nutrition, ed. 4, St. Louis, C. V. Mosby Company, 1947).

The following figures represent vitamin values (per hundred grams) of average human milk (Macy, I. G.; Williams, H. H.; Pratt, J. P., and Hamil, B. M.: *Am. J. Dis. Child.* 70: 135-192 [Sept.] 1945).

Vitamin A	290 I.U.
Thiamine	14.0 micrograms
Riboflavin	37.0 micrograms
Nicotinic acid	0.183 mg.
Ascorbic acid	5.0 mg.
Vitamin D	5 I.U.

Of course, the actual values found in any sample of milk will vary with the diet of the mother.

It can be seen that on the basis of 24 ounces (680 Gm.) of milk per day an infant will receive more than the 30 mg. of ascorbic acid, which is the recommended dietary allowance of the Food and Nutrition Board of the National Research Council. It is advisable, however, to add vitamin D to the diet of breast-fed infants, since it is difficult for them otherwise to obtain sufficient amounts of this vitamin.

PECULIAR YELLOWISH PIGMENTATION OF THE SKIN

To the Editor:—Over a period of years I have noticed slow development of a peculiar yellowish pigmentation of the skin, giving it an oriental color cast. Recently I had a small mole removed from my back. The healing of this dime-sized wound was slow. Because of the skin color, the dermatologist asked about my hemoglobin, which is 95 per cent, the highest it has been in many years. Under ultraviolet rays my skin is a startling yellowish green, different from the so-called normal bluish color. The only symptoms associated with this pigmentation are extreme sensitivity to sunlight and easy fatigability. What studies would you suggest? Routine physical and laboratory studies, including study of plasma proteins, revealed nothing abnormal.

Charlotte M. Biddle, M.D., Wayzata, Minn.

[This inquiry was referred to two authorities, whose respective replies follow.—ED.]

ANSWER.—A combination of symptoms which includes pigmentation, easy fatigability and sensitivity to sunlight should suggest the possibility of both Addison's disease and porphyria. Presumably causative factors of an external nature, such as physical or chemical agents, and cutaneous diseases have been ruled out, and routine studies should have eliminated from consideration also lymphoblastoma, jaundice, hepatocholecystic disease and anemias. It is assumed that all drugs, but particularly arsenic, gold, bismuth and quinacrine hydrochloride, and argyrosis have been ruled out. Such yellowing entities as senile elastosis and pseudoxanthoma elasticum are readily recognized by histologic study of a section of the skin. In carotinoid pigmentation, noticeable on the palms and soles, carotene may be recovered in the blood serum and urine.

ANSWER.—It would be helpful to know whether the inquirer was in active service with the Armed Forces during the last war. In recent years the most common cause of unnatural-looking, nonicteric, yellowish pigmentation "giving the skin an oriental cast" has been the ingestion of quinacrine hydrochloride over a prolonged period, as carried out routinely in the Pacific and Southern European theaters for suppression of malaria. Such treatment has caused discoloration of the skin similar to that described by the inquirer in many persons. The pigment fluoresces with a bright greenish yellow color under ultraviolet rays (Lutterloh, H., and Shallenberger, L.: *Arch. Dermat. & Syph.* 53: 349-354 [April] 1946. Ginsberg, J. E., and Shallenberger, P. L.: J. A. M. A. 131: 808-809 [July 6] 1946. Kierland R. R.; Sheard, C.; Mason, H. L., and Lobetz, W. C.: ibid. 131: 809-810 [July 6] 1946). These authors have also noted a brilliant fluorescence of the nails in these patients. Quinacrine pigmentation usually is more pronounced on exposed parts and may persist for several years after the medication has been discontinued. So far, no therapeutic suggestion to hasten the absorption of the pigment has been forthcoming. Some patients with quinacrine discoloration have complained of light sensitivity, but this symptom has never been particularly pronounced or caused any serious disturbance. Still it is possible that this compound, like other fluorescent dyes, acts as a photosensitizer. Anemia and exhaustion have been reported to augment the intensity and duration of the quinacrine pigmentation (Shallenberger).

Clinically, a somewhat similar color shade is seen in carotinoid pigmentation of the skin (aurantiasis cutis, Baeltz) which occurs as the result of excessive ingestion of carrots, squash, or other vegetables and fruits rich in carotene. In this condition the skin has a bright canary to deep orange-yellow color as contrasted with the "dirty yellow" shade of quinacrine pigmentation. Since the pigment accumulates in the horny layer of the skin, the most intensely colored areas are the palms and soles. Under filtered ultraviolet light the fluorescence is almost pure green and is not brilliant as in quinacrine pigmentation.

SWEET TASTE AND ARTERIOSCLEROSIS

To the Editor:—A 67 year old man has a diagnosis of hypertensive heart disease with myocardial damage, cardiac enlargement, and angina syndrome. An electrocardiogram of April 19, 1949, which included leads 1, 2, 3 and CF_5 to CF_6, inclusive, showed depression of ST; and ST_4 a Q of 6 mm., inversion of TCF_5 and TCF_6 and diphasic TCF_4 with depression of $STFC_4$, $STFC_5$ and $STFC_6$ indicative of coronary insufficiency. Results of other laboratory tests of April 19 are as follows: 4,700,000 red blood cells, 8,500 white blood cells, 92.9 per cent hemoglobin, 39.5 mg. nonprotein nitrogen, 1.1 mg. creatinine and 90 mg. blood sugar. The sedimentation rate was 21 mm. and the basal metabolic rate —1 per cent. The blood pressure on April 16 was 180 systolic and 90 diastolic in the left arm and 180 systolic and 92 diastolic in the right arm. The oscillometric test showed a reading of zero in the right and left midcuff with the patient lying down. Fluoroscopic examination showed the heart to be enlarged moderately to the left and clear lung fields. Eight months ago the patient experienced an extremely sweet taste in the mouth, and at night he had an excess amount of saliva. Hot food seemed to cause more trouble. There was no history of nausea or vomiting, but the patient is constipated. He smokes 6 cigarets a day. Can you suggest an explanation for the sweet taste and possible treatment?

Harry R. Dunn, M.D., St. Petersburg, Fla.

ANSWER.—The patient described would seem to have hypertensive coronary heart disease with a rather characteristic hypertensive electrocardiographic pattern and peripheral arteriosclerosis. However, the symptoms of salivation and sweet taste are not characteristic and are apparently uncommon in such involvement of the heart and arteries. Therefore it would seem almost certainly related to some factor other than the cardiovascular disease.

An early symptom of diabetes is a persistent sweet taste in the mouth, due to sugar excreted in the saliva. Appropriate tests should be made to exclude this possibility. The seventh and ninth cranial nerves transmit taste sensation from the tongue to the brain stem, while the tenth nerve serves the same purpose for taste buds not located on the tongue. All have a common sensory nucleus in the medulla, the nucleus of the tractus solitarius.

It is likely that a single taste bud reports only one kind of sensation—sweet, bitter, salty or sour. A peripheral lesion in the mouth or throat involving numerous taste buds would probably not be associated with the response of sweetness only, despite concentration of sweet taste receptors toward the tip of the tongue at this age. A reasonable explanation for the sweet sensation is a pathologic reflex through the vagus to the nucleus of the tractus solitarius or vascular disease in the region of this nucleus.

If the latter were the case, possibly a short period of trial with nicotinic acid, 50 mg. four times daily, might result in sufficient vasodilatation to improve the patient symptomatically. Also, thorough cocainization of the mouth and throat should have no effect on the annoying sweet taste. The salivation is probably a simple reflex resulting directly from the taste disturbance.

DIVERTICULA OF STOMACH

To the Editor:—A 34 year old woman was admitted with numerous complaints, including dissatisfaction with her previous doctors, vomiting two hours after a meal, without apparent relationship to exertion, and when she experienced hunger, and weight loss of 15 pounds (7 Kg.). Illness began one month previously with a purulent sore throat that did not yield to penicillin therapy. Additional complaints, most of which began somewhat before her arrival in Alaska, are fatigability, pain in the thoracic portion of the spine, diarrhea, shortness of breath on exertion, cramping in the lower part of the abdomen, palpitations and headache. There is a previous history of severe pain in the right arm and shoulder, for which she had been hospitalized. No definite diagnosis was given and recovery was spontaneous. Physical examination revealed a small, asthenic woman, appearing somewhat older than her stated age, with a large amount of lymphoid tissue in the posterior oropharynx. The eyes, ears, nose, throat, chest, heart, thoracic part of the spine and extremities were normal. The anal sphincter was moderately spastic, with hard feces in the rectum. The patient at this time complained of a feeling of "something protruding in the vagina." Bimanual examination was done in the supine and standing positions, and results were normal. Complete neurologic examination revealed no abnormalities. As a child she was raised by an aunt and had always understood that her father was dead and her mother unable to support her. She later learned that her father was alive. Results of the blood cell count, urinalysis, serologic examination and roentgenograms of the chest and portion of the spine were all normal. Gastrointestinal examination showed a constant pool of barium approximately 15 mm. in diameter, extending from the lesser curvature of the stomach at the junction of the corpus and cardia and suggesting a gastric diverticulum. Consultation with eye, ear, nose and throat specialists suggests that resection of the pharyngeal lymphoid tissue be done when the patient's physical condition permits. The patient's two attending physicians believe that she has a definite neurosis and that while surgical treatment is indicated it will not alter the general picture. I would like to know whether the gastric diverticulum is a likely cause of the nausea, vomiting and weight loss. If so, is medical or surgical treatment indicated? Can you give any references in the literature?

M.D., Washington.

ANSWER.—Diverticula of the stomach and duodenum usually do not produce symptoms, and the wise gastrointestinal surgeon rarely touches them. If, as probably is the case here, the diverticulum has been there from infancy, if it were going to produce symptoms it probably would have produced them long before the age of 34 years. If this diverticulum were to produce symptoms, one would expect them to be mainly those of irritation and spasm at the cardia. The most significant point in this case is that the woman has symptoms all over her body, most of which can best be explained on the basis of a nervous or unhappy state. Even if this woman had gallstones or a duodenal ulcer, surgical treatment would certainly not make her over. It might not even stop the vomiting. She has a good setup for neurosis because of her childhood unhappiness. Removal of her tonsillar tissue almost certainly will do her little good.

It is possible that a wise psychiatrist could help by finding out how much resentment she feels against her mother and how much harm such resentment is doing her. It is possible, also, that if one knew more about the parents, who deserted this woman, one would be able to determine the source of much of her nervousness.

Practically all the men who have written of diverticula of the stomach say that in most cases these little pouches do not produce symptoms. Unfortunately, the surgeons who have operated on some patients do not give enough information as to the condition of the patient during the years following the operation. The important thing is whether the patient lost all the symptoms.

In an excellent paper, Rivers, Stevens and Kirklin of the Mayo Clinic (Rivers, A. B.; Stevens, A. G., and Kirklin, B. R.: Diverticula of the Stomach, *Surg., Gynec. & Obst.* **60**: 106-113 [Jan.] 1935) reported a number of cases and stated that the general opinion of writers on the subject is that most diverticula cause no definite symptoms.

TOXICITY OF METHYL BROMIDE

To the Editor:—What are the lesions of the central nervous system caused by vapors of methyl bromide? What are the signs and symptoms? What is the prognosis in a case of intoxication by methyl bromide with nystagmus coma followed by a pseudobulbar syndrome? What measures are taken in the United States to avoid this intoxication as an occupational hazard in the industry of chemical fire extinguishers?

Jean Enderle, M.D., Brussels, Belgium.

ANSWER.—Methyl bromide is extraordinary in the severity of its injurious properties; it is perhaps not less than thirty times as harmful as its kindred substance, ethyl bromide. While decomposition into methyl alcohol and simple bromides occurs, the essential toxic molecule is that of the methyl bromide. Proportionate quantities of methyl alcohol and sodium bromide administered simultaneously induce responses dissimilar in kind and severity. Moreover, this decomposition process explains why an intake of methyl bromide, unlike most inhaled gases, never reaches a state of equilibrium and the damaging process proceeds.

In acute poisoning, pulmonary edema overshadows all other features, but, in the delayed state or chronic type, the area of predilection is the meninges and basal brain tissues. The ultimate lesion appears to center about a property of this organic bromide to penetrate cellular tissue everywhere or possibly only selectively. Other bromides apparently act only extracellularly, but the methyl bromide may pass the cell wall and decompose in the intracellular fluid. The resulting nervous system manifestations include: visual disturbances, speech defects, disorientation, hallucinations, mania or depression, convulsive states, tremors and temperature irregularities. The total number of well investigated cases is low. Therefore, statements as to prognoses must be safeguarded. The present consensus is that, if the acute phase is not fatal, the delayed responses involving the central nervous system ordinarily may be expected to disappear but only after a long period, representing many months. Victims of methyl bromide poisoning are peculiarly prone to the development of neuroses which sometimes are intractable.

Methyl bromide has unquestioned value as a fire extinguisher but is too dangerous for commendable use and is falling into disuse. Certain states and cities now legally ban its use for fire-fighting purposes. The great danger is from possible leaks, leading to prospective injury or fatality wherever such extinguishers with leaks may be stored. It has been stated that fire extinguishers containing methyl bromide have been prohibited by the National Board of Fire Underwriters. Wherever methyl bromide may come into use, the atmospheric concentration should not exceed 50 parts per million, and a figure of 20 parts per million or lower may be more acceptable. Emergency exposure in spaces containing methyl bromide call for the use of pressure hose masks or suitable canister respirators.

SOY BEANS, HEXANE AND HYPERTENSION

To the Editor:—Information is requested on the effect of benzene on blood pressure among workers in a local soy bean extraction plant. Several men claim to have hypertension after working a year or two in this department. In the process soy bean flakes are soaked in benzene, which removes the oil. The benzene then is recovered by fractional distillation. The entire process is carried out in carefully closed equipment with adequate vents and air circulation. Occasionally when the machinery is cleaned, and if airing is not sufficient, men working with the cleaning of the machinery complain of nausea and vertigo. One man, who was partially overcome with the fumes a year ago and now has moderate hypertension (according to his physician), becomes nauseated and has headache whenever he is exposed to the slightest odor of benzene. Is this amount of benzene enough to cause hypertension? This particular benzene is a petroleum distillate with the commercial brand name of Shelly Sol-B.

James M. Burk, M.D., Decatur, Ind.

ANSWER.—Hexane is a member of the methane series and, as such, is supposed to possess only low toxicity. However, it is not a simple asphyxiant like methane but is an anesthetic and irritant. Any nasal irritant of this character first leads to transitory and minor increase in blood pressure, which, however, soon is followed by diminution in blood pressure. Neither is important. Hexane is a constituent of such petroleum fractions as naphtha, benzine and gasoline, and its toxic properties are similar to the toxic properties of these substances. Concentrations up to 2,000 parts per million of air may be breathed for 10 minutes without any symptoms. When the concentration is near 5,000 parts per million, dizziness may occur within 10 minutes. For comparative purposes, it may be observed that for a kindred substance, benzol, the upper limit of tolerance is not over 100 parts per million for prolonged inhalation.

With respect to disturbances from "the slightest odor of hexane," it is probable that these disturbances are functional. Nevertheless, it is well established that some persons who have been exposed to a heavy concentration of vapors of such substances as naphtha, gasoline and benzine later will be promptly upset by exposure to traces. The odor produces no disease, but it serves as a reminder of earlier mishaps. From the description of the work conditions, no real hypertension may be anticipated, but dizziness, headache, nausea and vomiting may appear, particularly at the time the machinery is cleaned. Extensive cleaning operations may require the worker's wearing a positive pressure respirator during the occasional short clean-up period. The commercial hexanes frequently include some pentanes, heptanes and octanes. If so, these other petroleum fractions may be regarded as possessing approximately the same level of toxicity.

ANESTHETIC INJECTIONS FOR LOW BACK PAIN

To the Editor:—I would appreciate information on treatment for a patient with chronic arthritis of the lumbosacral part of the spine and/or sacroiliac joints. The patient had been bedridden for three days when first seen. Adhesive strapping of the lower part of the back by a colleague had not helped him. Four days ago I injected the points of maximum tenderness in the lumbosacral region with 2 per cent procaine, without epinephrine—about 15 cc.—and did a block of the left sciatic nerve. The patient was much improved and went to sleep for several hours, which he had been unable to do for the previous two nights. Today he was able to come to my office, the pain in the spine gone but some still present in the upper medial quadrant of the left buttock. Another procaine block was done, with 10 cc. of the 2 per cent solution. Is procaine injection an accepted treatment for these conditions? What follow-up treatment is indicated?

John F. Hegarty, M.D., Kingsville, Md.

ANSWER.—Injection of local anesthetic agents for relief of certain types of low back pain has been an acceptable adjunctive procedure for many years. However, such injections cannot be considered the treatment of choice for all patients with backache. Nor is the procedure always successful. Treatment by local injection of anesthetic agents, even though successful, should not be undertaken in lieu of thorough examination to permit an accurate diagnosis, particularly the exclusion of visceral disease and serious disorders of the musculoskeletal system.

The complexity of various inflammatory and mechanical factors involved in low back pain requires pertinent and detailed information before the underlying cause and the indications for other treatment can be accurately determined. Discussion of the diagnostic and therapeutic problems encountered in patients with low back pain will be found in such texts as Comroe's "Arthritis and Allied Conditions" (Philadelphia, Lea & Febiger, 1944, 1359 pp.) and Lewin's "Backache and Sciatic Neuritis: Back Injuries—Deformities—Diseases—Disabilities, with Notes on the Pelvis, Neck and Brachial Neuritis" (Philadelphia, Lea & Febiger, 1943, 745 pp.). Injections of local anesthetic agents are also discussed by Steinbrocker (Local Injections and Regional Analgesia with Procaine Solutions for Intractable Pain in Chronic Arthritis and Related Conditions, *Ann. Int. Med.* 12: 1917-1939 [June] 1939; Therapeutic Injections in Painful Musculoskeletal Disorders, J. A. M. A. 125: 397-401 [June 10] 1944).

YAWS AND SYPHILIS

To the Editor:—What is the etiologic relationship between yaws and syphilis?

M.D., New York.

ANSWER.—The exact etiologic relationship between yaws and syphilis remains controversial.[1] The modern conception is that yaws is a modified or primitive form of syphilis. Support for this belief is the identical structure of the causative spirochete (pallida and pertenue), similar serologic relationships and response to the same therapy. There are considerable data indicating that a person with an acquired immunity to yaws is also immune to syphilis and vice versa.

The striking differences are that yaws is not hereditary and is found most frequently in the hot, humid tropics where hygiene is poor. The neurologic and vascular systems are usually spared. The skin is primarily invaded, and childhood contamination confers adult immunity. Syphilis, on the other hand, is hereditary (congenital) and rare in the tropics. Furthermore, neurologic and vascular involvements are common in syphilis, all organs are invaded and after a cure the subject can become reinfected.

On account of their similarity the name treponematosis has been suggested. It would seem more logical to emphasize the similarity of these infections rather than their differences.

CHRONIC OTITIS EXTERNA

To the Editor:—Please outline the treatment for chronic otitis externa of fungus origin. The patient's ears became infected in Cuba in 1937.

M.D., Tennessee.

ANSWER.—External otitis of fungus origin should respond readily to cleanliness and the local use of a fungicide, such as 1:1,000 tincture of sodium ethylmercurithiosalicylate (merthiolate®), 1 per cent thymol in meta-cresylacetate, or 2 per cent aqueous methylrosaniline chloride. In long-standing cases, dermatitis medicamentosa frequently complicates the picture, and it may be necessary to omit the stronger fungicides and use instead 1 per cent salicylic acid in 70 per cent alcohol. An allergic dermatitis of the ears should also be considered in stubborn cases. The allergy is generally due to one or more foods, house dust or feathers.

d-AMPHETAMINE SULFATE

To the Editor:—Is there any unfavorable results from prolonged use of *d*-amphetamine sulfate (dexedrine® sulfate) in cases of nervous depression occurring in the aged? What dosage of the drug is appropriate for such cases, and what should be the maximum daily safe intake?

M.D., Texas

ANSWER.—Amphetamine, in overdosage in normal adults, will produce a rise of blood pressure, nervousness, tremors, sweating, palpitation and increased respiration. Severe poisoning may produce convulsions and collapse. In the aged, these reactions may occur more frequently and may be more important because of the presence of degenerative diseases of the heart and blood vessels.

Amphetamine, if used to treat an agitated depressed state in an aged person, should be given cautiously, since it may tend to exaggerate the nervousness and produce an effect opposite to the one desired. Dosage should not exceed 2.5 to 5.0 mg. as a single dose, and smaller amounts should be used initially. Increase in dosage is not necessary and is undesirable if a satisfactory response is obtained. If no response is obtained to a single dose of 5.0 mg., it is unlikely that larger doses will be productive of good results. Not more than four to five such doses should be given in any twenty-four hour period.

HYSTERECTOMY AND OOPHORECTOMY

To the Editor:—A 48 year old patient with symptoms of the menopause had a supravaginal hysterectomy for fibroids. Both ovaries were found to be normal, and the surgeon did not remove them. Is this considered good practice?

M.D., Conn.

ANSWER.—There is no unity of opinion among gynecologists as to whether or not ovaries which appear normal should be removed at the time of a hysterectomy. Some gynecologists never remove normal-appearing ovaries, regardless of the patient's age, whereas others take out the ovaries routinely after certain ages, varying from 40 to 45 years. Most gynecologists excise the ovaries almost routinely after 45 years of age because of the possibility that cancer may occur after operation. Cancer of the ovary is difficult to diagnose and has a low incidence of cure; hence the frequent resort to bilateral oophorectomy at the time of hysterectomy. If, however, a woman is highly emotional, it is not advisable to remove her ovaries even though she is 45 years or over, because the sudden appearance of the menopause might distinctly be harmful. In most women, however, excision of the ovaries after 45 years of age does no harm, and, although this operation leads to distressing symptoms often, these annoyances can be relieved by medication.

SALT SUBSTITUTE AND LIQUID PETROLATUM

To the Editor:—Can you furnish me with the name of a salt substitute, other than potassium chloride, that is considered harmless? Also, do you think that 1½ ounces (43 Gm.) of liquid petrolatum taken every night is harmful to a patient who has had a stroke?

J. Henry Hymstedt, M.D., Macomb, Ill.

ANSWER.—1. A satisfactory substitute for sodium chloride has not been found. Salts containing ions foreign to the body in lieu of sodium may be dangerous (e. g., lithium); other ions may not produce a "salty" taste or may produce an objectionable taste (e. g., potassium). Monosodium glutamate has been proposed as a salt substitute because of its low sodium content, but the flavor is not truly salty and may lead to use of excessive amounts. Ammonium chloride has also been proposed, but since it is an acid salt it has definite drawbacks. Combinations of ammonium and potassium chloride are available for use and at present are considered to be the best substitutes available.

2. It is unlikely that the quantity of liquid petrolatum mentioned would be harmful when taken as suggested.

INGESTION OF REFRIGERATED SYPHILITIC BLOOD

To the Editor:—What happens to spirochetes of syphilis in blood that is stored in the refrigerator? How long are they viable? (2) What is the possibility of one's getting syphilis from ingestion of stored syphilitic blood (blood stored about one month in the refrigerator)? My son (10 months old) swallowed such blood.

M.D., Texas.

ANSWER.—The spirochetes of Treponema pallidum die when stored at refrigerator temperature. Their maximum period of viability is less than 96 hours. There is practically no possibility of one's contracting syphilis from the ingestion of blood stored for a month.

STAINLESS STEEL KITCHEN UTENSILS

To the Editor:—I have endeavored to find the cause of mild peripheral neuritis associated with disturbances in the veins of the forearms and arms. Gaseous poisons have been eliminated, as have the usual heavy metals causing chronic poisoning. However, there is a history of the use of "stainless steel" kitchen utensils; I wonder whether cadmium or similar metal may not be taken into the system from such "stainless steel" during its use in cooking. I have noted that grey-black stains occur when such "stainless steel" receptacles are placed on a white table cloth.

M. Korasek, M.D., Shidler, Okla.

ANSWER.—"Stainless steel" for kitchen purposes contains only traces of cadmium. The commonest formula is 8:18:74 parts, respectively, of nickel, chromium and steel. Other types may include low percentages of cobalt, manganese and silicon. The nationwide use of stainless steel and aluminum utensils attests the relative harmlessness of both types. It may not be claimed that such metals are wholly insoluble. Acids from various foods attack these metals, leading to trace inclusions in victuals as consumed. Manufacturers of these products have well studied the extent of metal solution under varied conditions. The results are not alarming. Many rumors gloomily forecast evil consequences from the use of such utensils, but proof is lacking. Most of the chemicals mentioned are constant physiologic constituents of the body. No commercial "stainless steel" is utterly stainless. The black smudges mentioned may represent oxidation, or they may represent soot from cooking fuel. The association of neuritis with stainless steel as the cause may be doubted.

TUBERCULOUS MENINGITIS

To the Editor:—A 31 year old man has tuberculous meningitis secondary to far advanced silicotuberculosis. There has been definite clinical improvement following a thorough course of intrathecal streptomycin, ten weeks to date. At present he is receiving 50 mg. of streptomycin intrathecally twice weekly. How long should intrathecal therapy be continued?

Elliot A. Routh, M.D., Los Angeles.

ANSWER.—It is presumed that the patient is receiving regular intramuscular injections of streptomycin in addition to the intrathecal treatment. It has not been definitely determined how long intrathecal therapy should be continued. The tendency has been, especially in Europe, where physicians have had much more experience than those in this country, to reduce gradually the intrathecal dosage of the drug over a period of several months. The lower limit of this dosage is about 25 mg. In addition, the spacing of the injections has usually been wider as time goes on. In the case presented, it will probably be best to continue the present regimen as long as the patient shows improvement of the spinal fluid, such as a reduction in pressure, a reduction in albumin and globulin, a rise in sugar, a decrease in the cell count and, of course, a disappearance of acid-fast bacilli. If the clinical symptoms of the spinal fluid remain normal for a period of several weeks, treatment may be discontinued, but it should be reinstituted if any of the symptoms reappear. A cure should not be pronounced until the patient has been in good health one, two or even three years.

CONSANGUINITY AND Rh FACTORS

To the Editor: Should married first cousins, the wife being Rh negative and the husband being Rh positive, have children? Neither family history is significant for congenital anomalies. The wife has had a thorough diagnostic examination and except for an allergic diathesis is in fairly good health. They want children but are concerned about the problem of consanguinity and the Rh-negative status.

M.D., New Jersey.

ANSWER.—The Rh incompatibility of the couple is not influenced by the consanguinity. In other words, the first child is certain to be normal unless the woman had received transfusions of Rh-positive blood. The outlook for later pregnancies depends on various factors, one of which is whether the husband is homozygous or heterozygous Rh positive. This may be possible to establish by tests of his blood with anti-hr' (anti-c) serum, which is now available. This serum is applicable if he is Rh$_0$ (CDe); if he is found to be hr' positive, heterozygosity is established, but if he is found to be hr' negative, he is homozygous. It is also advisable to test the Rh factor in the husband's parents. If one of them is Rh negative, the husband is heterozygous Rh positive. The importance of this observation is that a homozygous Rh-positive man can have only Rh-positive children, whereas he may have Rh-negative children if he is heterozygous Rh positive. The other factors determining prognosis are not yet known.

STERILIZATION OF NEEDLES TO PREVENT INFECTIOUS HEPATITIS

To the Editor:—Recently several members of the staff of one of the larger hospitals in El Paso recommended heat sterilization of needles and syringes rather than the use of chemicals. The hospital authorities compromised by requiring heat sterilization of equipment used for intravenous procedures but continued the use of chemicals for preparation of needles and syringes used for hypodermic injections. The two editorials on this subject in *The Journal*, Sept. 22, 1945, and Feb. 12, 1949, both state that homologous serum jaundice may be transmitted by the injection of blood or blood fractions, by withdrawal of blood from the vein or the administration of medicaments, intravenously or intramuscularly, with improperly sterilized equipment. Neither editorial states specifically whether or not this disease may be transmitted by the more frequent hospital procedure, namely, hypodermic or subcutaneous medication. This decision becomes important in view of the decision made by this hospital. Would you kindly answer the following questions? (1) Could homologous serum jaundice be transmitted from patient to patient by needles or syringes used in hypodermic injections which are not properly sterilized? (2) How long is boiling necessary for adequate sterilization, to prevent transmission of this disease? I recently saw a patient in consultation who had jaundice almost simultaneously with her husband. Four months previously both had received a subcutaneous injection, presumably of different drugs, on the same day and in the same physician's office. The type of sterilization of needles and syringes in this case is not known, but supposedly was by boiling. (3) Could homologous serum jaundice be transmitted by the use of immune globulin?

M.D., Texas.

ANSWERS.—The viruses (or icterogenic agents) responsible for the naturally occurring infectious hepatitis and the serum-borne variety of the disease are among the most resistant pathogens known. They will pass through Seitz filters, will survive repeated freezing and thawing, withstand a temperature of 56 C. for thirty to sixty minutes and are not affected by dessication. They are not killed by ordinary chlorination, 1:2,000 solutions of merthiolate® (sodium ethylmercurithiosalicylate), 0.5 per cent solution of phenol in ether or 0.2 per cent solution of tricresol. Extremely small inoculums (less than 0.01 cc.) of contaminated serum have been known to produce the disease. For these reasons, it is now generally believed that improperly sterilized hypodermic needles or syringes can readily transmit homologous serum jaundice, as shown by the spread of the condition in diabetic, venereal and chrysotherapy clinics. Swedish authorities also have pointed out the increased frequency of the disease in persons who have been hospitalized, the incidence being highest in patients, such as diabetic patients, who have been subjected to repeated venipunctures or to hypodermic administration of medicaments.

The cases of hepatitis in man and wife mentioned bring to mind Bradley's statement: "When hepatitis occurs 40 to 120 days after the administration of a human blood product or other parenteral therapy, it is almost certainly homologous serum jaundice and must be treated as a disease with an appreciable mortality." This has never been disputed by anyone familiar with the problem; it seems probable in cases under consideration that improperly sterilized syringes or needles were responsible. Autoclaving or boiling for three to five minutes of such equipment is recommended. The generally employed chemical methods for sterilization are probably insufficient. Separate syringes and needles should be used for each patient. Recent reports indicate that ultraviolet irradiation will inactivate certain strains of hepatitis virus; and on the basis of this evidence, irradiated plasma has been prepared for clinical use. Clinical experience with it has not been sufficiently large to justify a final statement as to its safety.

Neither immune globulin nor human serum albumin has been shown to transmit hepatitis; the former has in fact been used (with doubtful success) as a prophylactic agent.

CANCER OF CERVIX IN JEWS AND NON-JEWS

To the Editor:—In Queries and Minor Notes (J. A. M. A. 140:1069 [July 23] 1949), your answer to the query about "Cancer of the Cervix in Jews and Non-Jews," appears to be somewhat meager. With respect to the incidence of cancer of the cervix in Jewish women, Vineberg first called attention to the infrequency of cancer of the cervix in patients seen at Mount Sinai Hospital, the largest general American Jewish Hospital in New York. He noted only 18 patients with cancer of the cervix in 1,900 patients admitted during 1893-1906, and of these 18 only 9 were Jewish. In our study at Bellevue Hospital (Kaplan, I. I., and Rosh, R.: Am. J. Roentgenol. 57:650-664 [June] 1947), among 1,342 patients with cancer of the cervix, seen in the Radiation Therapy Department over a period of twenty-two years, only 25 were Jewish. Regarding the carcinogenic possibilities of smegma, Plaut and Kahn-Speyer (Science 105:391 [April 11] 1947) were able to show that human penile smegma contained a carcinogenic substance. We may then rightly consider the question of what effect circumcision has on preventing cervical cancer. The answer is yet to be noted. I am of the opinion, therefore, that one may properly conclude that the incidence of cancer of the cervix in Jewish women is low.

Ira I. Kaplan, M.D., New York.